Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

PAPERS
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Papers

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Global perspectives on Computer-Assisted Language Learning

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Socially multilingual? An exploration of informal language learning practices on Facebook

Antonie Alm
University of Otago
Dunedin, New Zealand

Abstract

This paper investigates the use of Facebook for informal language learning by tertiary language students. 191 language students (Chinese, German, French, Japanese and Spanish) completed an anonymous online questionnaire on (1) their perceptions of Facebook as a multilingual environment, (2) their online writing practices and (3) their views on the educational value of their experiences. Findings indicate that language students are using a range of Facebook features to expose themselves to and for practicing the languages they study. Some variability in use could be explained by the proficiency-levels of the students (beginner, intermediate and advanced levels), the strength of social ties with native speaker Facebook friends, and personal attitudes towards the social networking site. Participants displayed a high level of personal agency in their second language Facebook use, which was shaped by online practices in their native language. The findings confirm that Facebook is perceived as a personal communication tool and that any endeavours for training of language students in the use of Facebook for language practice need to consider learner perceptions of the social networking site.

Keywords: Facebook; informal language learning

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1. Introduction

As language teachers are exploring educational uses of Facebook (Blattner & Fiori 2009, 2011; Blattner & Lomicka 2012; Mills 2011; Promnitz-Hayashi 2011), language learners discover their own ways of using the social networking site (SNS) to communicate with native speakers and to practice their language skills. Sockett (2011) found that 30% of English students at a University in France regularly communicated with English native speakers on the SNS. The independent use of Facebook (FB) for L2 practice, while difficult to observe and evaluate, represents an important step towards learner autonomy and deserves recognition in formal educational settings (Kabilan et al. 2010; Mitchell 2012; Sockett & Toffoli 2012).

This study seeks to shed light on the informal L2 FB practices of tertiary language students in New Zealand. It reports on the data collected from 191 students (Chinese, German, French, Japanese and Spanish), who replied to an online questionnaire developed to answer three research questions:

1. Do language students perceive FB as multilingual environment?
2. What are their online language practices?
3. How do they evaluate their online experiences for language learning?

2. Method

2.1. The questionnaire

The questionnaire addresses (1) the multilingual appearance of the students FB profile (through language settings, liking pages, groups, sharing, native speaker FB friends), (2) language practices on FB, such as writing status updates, commenting, chatting and private messaging and (3) the participants’ views on the educational value of their online experiences. A range of answer choices (multiple-choice, Likert-scale and open-ended) were selected to enable participants to indicate preferences and to elaborate on their views and practices. In addition, demographic data was collected about gender, age and participation in language exchange programmes. The questionnaire was piloted with a small group (n=10) and ambiguous questions were reworded. The final questionnaire consisted of 33 items.

2.2. Data collection

An email was sent to all 698 students of the language department, explaining the purpose of the study and encouraging students to participate even if they were not using the SNS in the language they study or if they were not Facebook users. 191 responses were received (response rate 27%), including 12 from non-users. Completion numbers for each section are 167 for part 1, 163 for part 2 and 157 for part 3.

2.3. Data analyses

The data was grouped and compared in three categories of elementary, intermediate and advanced learners to establish if proficiency related to L2 FB use. Cross-tabulation analysis was used to compare students’ evaluation of the usefulness of FB for L2 language practice with their indicated use of individual FB features. The open-ended data was coded inductively, sorted into categories and related to the findings on language proficiency and perceived usefulness.

3. Discussion

3.1. Quantitative data

A comparison of the mean scores of the three proficiency groups showed slight but consistent increase in L2 FB activity in all three areas of investigation. The more advanced the student, the higher the frequency of changing of language settings, of liking pages, of belonging to groups (see Table 1), of writing status updates, of commenting and of using private messaging with native speakers. More advanced students also perceived FB as more useful for L2 exposure and practice.

<table>
<thead>
<tr>
<th>Do you use the language settings to change Facebook from English to the language you study?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined (n=167)</td>
</tr>
<tr>
<td>No, I only use FB in English.</td>
</tr>
<tr>
<td>Yes, I changed the language settings to the language I study.</td>
</tr>
<tr>
<td>I change it back and forth.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Do you “like” Facebook pages in the language you study? If yes, which kind?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational language learning FB pages</td>
</tr>
<tr>
<td>Newspapers in the language I study</td>
</tr>
<tr>
<td>Places related to the language I study</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Do you belong to any Facebook groups that use the language you study?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, study groups set up by teachers</td>
</tr>
<tr>
<td>Yes, study groups set up by students</td>
</tr>
<tr>
<td>Yes, special interest groups</td>
</tr>
<tr>
<td>No, I don’t belong to any groups.</td>
</tr>
</tbody>
</table>

Table 1: L2 FB features at beginner, intermediate and advanced levels
The reason for the higher level of engagement could be explained by greater ability in language use. However, the data indicates that it related to the higher number of native speaker FB friends and participation in language exchange programmes (Table 2).

<table>
<thead>
<tr>
<th>Have you been on exchange in a country where the language you study is spoken?</th>
<th>Combined</th>
<th>Beginner</th>
<th>Intermediate</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, on a high school exchange</td>
<td>41.4%</td>
<td>23.7%</td>
<td>50.0%</td>
<td>52.1%</td>
</tr>
<tr>
<td>Yes, on a university exchange</td>
<td>9.4%</td>
<td>0.0%</td>
<td>1.3%</td>
<td>24.7%</td>
</tr>
<tr>
<td>No</td>
<td>52.4%</td>
<td>76.3%</td>
<td>50.0%</td>
<td>31.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Do you have Facebook friends who are native speakers of the language you study?</th>
<th>Combined</th>
<th>Beginner</th>
<th>Intermediate</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>86.8%</td>
<td>77.4%</td>
<td>86.9%</td>
<td>90.7%</td>
</tr>
<tr>
<td>No</td>
<td>13.2%</td>
<td>22.6%</td>
<td>11.1%</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How have you met these native speakers?</th>
<th>Combined</th>
<th>Beginner</th>
<th>Intermediate</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>On a language exchange</td>
<td>77.5%</td>
<td>67.9%</td>
<td>82.6%</td>
<td>80.0%</td>
</tr>
<tr>
<td>On holiday</td>
<td>34.2%</td>
<td>46.4%</td>
<td>32.0%</td>
<td>32.0%</td>
</tr>
</tbody>
</table>

Table 2: Language exchange and native speaker FB friends at beginner, intermediate and advanced levels

The cross-tabulation analysis also showed that students who perceived FB as useful or very useful were more likely to have been on a high school language exchange. The chi-square test indicates that the relationship between these two variables is significant ($\chi^2=14.28$ df=2 $p=0.0008$).

3.2. Qualitative data

3.2.1. L2 use in online interactions

More proficient students tended to use more FB features to write in their L2, with a preference for private over public interactions. The publication of status updates seemed in conflict with the L1 audience. Students were concerned that L2 status updates could be perceived as “pretentious”, “weird” or “rude”, and would “alienate” L1 friends. Chatting or private messaging was the preferred option. Lower proficiency learners tended to chat with classmates, using salutations and stock phrases in the L2. Intermediate level learners interacted more frequently with native speakers friends, sometimes mixing languages, (a) by starting in the L2 and carrying on in the L1 for more detail, (b) by swinging back and forth “sometimes in the same sentence”, (c) or by taking turns so that both partners had L2 language practice. The more advanced learners compared L2 to L1 chatting practices. They tended to use their L2 more exclusively and considered chatting as an opportunity to use language learned in the TLC.

3.2.2. Perceived usefulness

Participants with existing connections to native speakers enjoyed the informal setting, the use of everyday and informal language, the range of topics and the access to the TL culture. However, not all connected students agreed. Some felt that informal practice did not help them with academic study. There was also some resistance against FB for language learning and as a communication device generally. While it helped “to keep the wheels turning”, it was perceived by some as a replacement tool, not comparable to real conversation.

4. Conclusions

The study showed that language students are using a range of FB features for L2 exposure and practice. Some variability can be explained by the varying levels of proficiency, the strength of social ties and personal attitudes towards the SNS. Participants displayed a high level of agency in their L2 FB use, shaped by existing L1 FB practices. For example, the option of “liking” or “sharing” pages to increase L2 exposure was dismissed by some, as they disliked the practice. This shows that FB is perceived as a personal communication tool and that any endeavours for training L2 students (Prichard 2013) in the use of FB for L2 practice needs to carefully consider individual “cultures-of-use” (Thorne 2003).
5. References


Personalizing language learning/teaching in PerLe: An open-source dynamic approach

Francesco Altimari
University of Calabria
Italy

Anna Franca Plastina
University of Calabria
Italy

Michael Cronin
University of Calabria
Italy

Maria Caria
University of Calabria
Italy

Abstract

This research advocates the importance of a paradigm shift away from the unsustainable one-size-fits-all approach and toward personalized language learning/teaching through an open-source dynamic approach adopted in a customized Personal Learning Environment (PerLe). The approach integrates values of the open-source paradigm, principles of participatory learning and activities of self-regulated learning in line with the aims of the UN Decade of Education for Sustainable Development (2006-2015). Investigation was conducted on the benefits of an e-course of English for Specific Purposes (ESP) for postgraduates specializing in Clinical Pathology. Preliminary results show benefits in terms of learner control, language proficiency, participatory, and self-regulated learning. There is a strong need to move CALL practices beyond current do-it-our-way methods to promote sustainable personalized language learning.

Keywords: ESP; ESD; ECLASS; Open-Source Dynamic Approach; Personal Learning Environments

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1. Introduction

A predominant objective of Education for Sustainable Development (ESD) is to improve quality in teaching and learning by engaging learners in formal, non-formal and informal education, employing pedagogical techniques that promote participatory learning (UNESCO, 2007). Emerging technologies are a key enabling factor that can accelerate ESD and tackle the transition to a sustainable future (Lovink 2007). The availability of open-source content and more customizable Learning Management Systems offers new potential for the implementation of dynamic approaches to language learning, which accelerate the paradigm shift from the unsustainable one-size-fits-all approach toward personalized learning.

Our main research objective was to seek the benefits that learners obtain from the experience of engaging in an e-course which uses a dynamic open-source approach to personalize language learning. Seventeen postgraduates, attending the School of Clinical Pathology at the University of Calabria, are currently enrolled in an...
2. Method

Our dynamic approach integrated values of the open-source paradigm, principles of participatory learning and activities of self-regulated learning. Digital resources were blended with self-authored content to support learner engagement both in formal learning to fulfil e-course objectives and informal learning. Participatory learning allowed learners to create, communicate, collaborate and study through a bricolage of open-source tools and the repository of Learning Objects in PerLe. Flexible learning steps were introduced to enhance self-regulated learning. This was possible because PerLe responds to the principles of adaptability and extensibility. Differently from “locked-down, do-it-our-way” platforms that inhibit learner control (Siemens, 2004), PerLe catered to the do-it-yourself approach. Thus, adaptability was practically implemented following the ECLASS model (Gerson, 2000): Entry (learning objectives), Clarify (theoretical explanation), Look (exemplification), Act (tasks), Self-Assessment (fulfilment of learning objectives), Summary (check-list of task completion). This enabled learners to choose how to control their learning processes and self-regulate learning. As discussed elsewhere, institutional constraints limit student engagement in practices of participatory and self-regulated learning (Altimari et al., 2012; Plastina & Cronin, 2012). Adaptability was also implemented in the range of task activities, tailored to different learning preferences and styles (Felder-Silverman, 1988). Learners were allowed to make their own choices while pursuing the same learning goals. Extensibility was implemented through access to extensive open-source tools and the repository of learning content, sourced especially when learners worked on producing their e-portfolios.

3. Discussion

The available recording system was used to collect quantitative data on learners’ ECLASS behaviour, showing their choices in controlling their learning processes. Results (in Figure 1) regard all the ECLASS steps, except for Entry, which does not cover the factor of learner control.

Results show that learners controlled their learning processes through the following behaviours: (a) major engagement in task activities (Act 37%); (b) moderate engagement in referencing practical examples (Look 24%); (c) moderate engagement in personal learning progress (Self-Assessment 21%); (d) scarce engagement with theoretical explanations (Clarify 14%); (e) very scarce engagement with theoretical checklists (Summary 4%). Results thus reveal that the do-it-yourself approach generated spontaneous learning-by-doing behaviour (Act, Look and Self-Assessment: 82%), and that learners chose to engage less with theoretical issues (Clarify and Summary: 18%).
Quantitative data on self-assessed language levels in the pre- and post-learning phases were collected from learners’ e-portfolios. Data refer to an online questionnaire based on the Common European Framework (CEF) completed by learners. Comparative data were elaborated for each learner (Figure 2).

Results demonstrate that learners self-assessed their language levels more positively after engaging in personalized learning. While these results are consistent with those of their ECLASS behaviour, they implicitly indicate that learners’ preference for certain tasks and activities empowered self-regulated learning with a positive impact even on weaker language skills.

Qualitative data on learner perception were gathered from the informal forum where learners freely posted comments and ideas about different aspects of the e-course and the learning environment. Comments mostly focussed on the importance of language use to: (a) create multimedia products (e.g. animated doctor-patient dialogues) and new resources (e.g. an ESP Wordbank); (b) communicate through different social networks (e.g. blogs, twitter) sharing professional ideas or for enjoyment; (c) collaborate, for instance, in creating a small content repository of external resources; (d) study (e.g. formulating and responding to FAQs).
4. Conclusions

The investigation revealed that students chose to control their learning processes, orienting their behaviour mainly toward learning-by-doing. Active engagement was further reflected in learners’ improved language skills. The overall positive attitude shown rested mainly in the control learners were conceded through the dynamic open-source approach adopted in PerLe. Our research is currently investigating how learner control can be further empowered in succeeding modules to enhance learner preferences. Personalized learning is key to achieving positive learning outcomes and to meeting different learner needs and preferences. This approach to CALL should be further developed to promote sustainable personalized learning.

5. References


Gerson, S. M. (2000). E-CLASS: Creating a guide to online course development for Distance Learning. Faculty Online Journal of Distance Learning Administration, 3(4).


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SpeakApps Open Educational Resources

Christine Appel
Universitat Oberta de Catalunya
Barcelona, Spain

Abstract

SpeakApps, a European project funded with support by the Lifelong Learning Programme of the European Commission, seeks to provide solutions for online oral skills practice in a second language. This paper describes the Open Educational Resources space in the project platform. This space contains the pedagogical contents developed during the project by partners in the six project target languages: English, Catalan, Dutch, Irish, Swedish and Polish. The design process and the considerations taken into account, as well as the participation results are described here.

Keywords: Speaking skills; Open Educational Resources; User-centred design

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1. Introduction

Increasing speaking time practice for language learners is a challenge for language educators. In recent years there has been an increase of online tools that facilitate online communication amongst students beyond classroom contact hours, both asynchronous and synchronous. Two key factors for this communication to be of the maximum possible benefit for students are the functionality of easy recording of student performance, and task design. Easy recording means that the teacher’s presence is not required in real time and the student can do post-task activities based on their activity. An adequate task design will guide students in their learning process and ensure the activity they engage in is geared towards their main objective: improving their second language speaking skills.

The European project, SpeakApps, has developed a suite of free ICT-based tools and resources with a view to support the development of oral skills enabling learners and teachers to practice and evaluate speaking skills at a distance or beyond the physical classroom. The sustainability of these tools relies on a sufficiently large community of users. In order to enable teachers and students to use the tools with minimum effort, the project has developed open educational resources (OER), and a platform for teachers to share their experiences, download activities, work collaboratively with other teachers in the design of activities and contribute to the continuous developments of the contents of the platform to adapt to future technological developments in this area. This paper describes the main project outcomes with a focus on its OER platform.

2. Method
The design of the SpeakApps OER platform was a collaborative effort in which actors from different backgrounds participated to inform and engage in a process of negotiation which led to the creation of the present platform. Amongst these actors were academics experts in teacher training, as well as activity and task design in second/foreign language teaching, language teachers with first-hand experience in online language teaching, user-interface designers, developers and social-media experts.

We followed a user-centred design (UCD) approach starting with an analysis of end-users’ (namely language teachers) needs and requirements followed by a conceptual design by academics, implemented by developers and tested by teachers who suggested modifications in pilots which fed into the following cycle of pilots. The initial set of requirements took into account two purposes: (a) to address the need of teachers to have easy access to participation in the 4 R activities of an OER, Revise, Remix, Reuse and Redistribute (Wiley & Green, 2012), and (b) to guide authors of activities and tasks and help them reflect on key issues of task design and implementation in online speaking activities for second/foreign language learning.

From a pedagogical point of view, fields for metadata were added to the upload/editing function in order to push the author and prospective users to provide and reflect on information related to the teaching and learning contexts in which these activities would take place and how they would address target learner needs.

From a technical point of view, the repository is linked to the SpeakApps platform and Moodle classrooms, which means that users can easily navigate from one space to the other with no need for multiple logins. The editor is developed on XWiki which allows you to customize the wiki to your own specific purposes. The developments for this customization were developed by the team of Learning Services in the Office of Educational Technologies at the UOC.

3. Discussion

The SpeakApps OER platform was designed with a threefold purpose. First of all it serves as a repository for teachers of languages to upload, share and download materials and activities designed by individuals. Secondly, it is also an editor meaning that teachers contributing can create the materials online within the platform and in collaboration with other teachers. The default license for all its contents is Creative Commons (Attribution, Non-commercial), which allows users to easily adapt or reuse resources for different educational contexts, levels or even target languages. Finally the structure of the platform, the form and contents serve as a guide for teachers with no prior experience in the design of contents for online practice of speaking skill in a second language.

In a discussion of affordances of OER’s, Weller (2010) points out strengths and weaknesses of what he calls big OERs, referring to online courses produced by well-known institutions able to cover the costs and provide a reputation as a guarantee of quality and reliability, and little OERs, containing low-cost contents produced by individuals and stored in spaces which are often shared with contents of other areas but which are often more dynamic and open to participation. He suggests that “It may well be that a ‘mixed economy’ of both types of OER is the best route to realising open education.” The SpeakApps OER participates of some of the advantages of both types in that it provides a space dedicated exclusively to contents related to the development of L2 oral skills online, but built on contributions of individuals and their collaborative effort in bringing this platform further.

In terms of reuse of contents, the project target languages are one widely taught language, English, and five less widely taught European languages: Catalan, Irish, Swedish, Dutch, and Polish. The idea behind this configuration is to gather the experience and resources available for a language with a strong presence and make them available to less commonly taught languages which often have fewer materials at their disposal and for which OER repositories offer new opportunities and solutions (Blyth, 2013).

4. Conclusions

Over the period of its first three months of existence and coinciding with the end of the project, the OER had had over 200 entries of projects, activities and tasks in six different languages: English, Catalan, Dutch, Swedish, Polish and Irish. The project is still ongoing and we are currently initiating the improvements of graphical design and user-interface design. In addition, we are putting together a set of measures in order to make the OER instrumental in the development of a community of teachers using the SpeakApps platform. Finally, a key development will be the integration of built-in mechanisms that will guarantee the quality of contents in the platform based on partly guidelines put together by experts and partly feedback from other
experienced teachers.

5. Acknowledgements

The SpeakApps project was funded with support of the Lifelong Learning Programme of the European Commission.

6. References


Creating a sustainable video annotated corpus: Issues and opportunities in a constantly evolving digital world

Stewart Arneil  
University of Victoria  
Victoria, Canada

Catherine Caws  
University of Victoria  
Victoria, Canada

Abstract

This paper reports on a six-year research and development project that has allowed the design, development and implementation of an online corpus of short videos, with a focus on a recent rewrite. FrancoToile (hosted at http://francotoile.uvic.ca) features about eighty speakers of French from the four corners of the globe. Each video is accompanied by an XML transcript. The system’s French/English interface, written in html5, allows users to view videos with or without subtitles, generate indexed returns based on key-word searches, and bookmark any sentence within a video.

The paper will highlight three main aspects of the project: (1) what design method was adopted to address constantly evolving pedagogical and technical (e.g. separation of concern) requirements, (2) how the software was designed to support evolving research questions (e.g. TEI-XML for data, modularized video), and (3) how the software has changed over time to better accommodate the pedagogical needs and provide long-term maintainability and extensibility (e.g. media support, more xml-based).

The paper will focus on aspects related to its development and its pedagogical applications. The development portion address how and why the tool's features and technical aspects of its design have changed over time. The pedagogical presentation will explain the type of tasks that can be used to take full advantages of the features contained within the site.

As a conclusion, we will comment on challenges and opportunities brought about by such CALL developments and tools. These will be based on empirical data on learners’ interactions with the system.

Keywords: online video corpus; html5 interface; software design; CALL development, interactions

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1. Introduction

The use of corpora in language learning research has grown in the last decade due in part to the development of systems facilitating their integration into educational settings and their easy retrieval by learners. Web-based corpora can be advantageous to learners: they show language in use, they often use authentic material, and they can easily be updated to provide good evidence of language patterns and/or changes (e.g. Bernardini 2004;
Braun 2005). Yet, as stated by Braun (2005), corpora are not used enough as main language resources because their content has not been tailored to fit specific learning or instructional goals.

In this paper we report on the method used to create a digital library of videos and annotated transcripts called Francotoile (http://francotoile.uvic.ca) with the aim of helping users develop their cultural and linguistic literacies in French. Francotoile uses a bilingual web-based interface, allowing users to view videos, display or hide subtitles, generate indexed returns based on keyword searches of one or all videos, and bookmark specific frames within each video.

This presentation focuses on the technical changes between two generations of Francotoile (2006 and 2011) to address pedagogical issues within ever-changing technological contexts.

2. Method

Our project is set within an educational framework and the process for developing the tool is based in part on the Analysis-Design-Development-Implementation-Evaluation (ADDIE) methodology (e.g. Strickland, 2006; Colpaert 2004, 2006), an instructional systems design (ISD) used to guide developers in the creation and evaluation of language software or computer systems. As explained by Colpaert (2006) one advantage of the ADDIE model is that “each stage delivers output which serves as input for the next stage” (115).

2.1 Model

Good software design advocates what is called “separation of concerns” into model (the logical structure and actual data), view (how information is presented to the user), and controller (the code that manipulates the view and model).

The metadata and transcripts are stored as TEI XML in an eXist database. The core model of the transcript has proven sound, but has been enhanced slightly. We added geo-location elements to support a map showing each subject’s location. We added attributes to support the inclusion of questions from an interviewer, which had not been anticipated in the original model.

The video is stored as files on the filesystem. In 2006, only QuickTime using .mov files provided the control we needed, but now all major browsers include video players with adequate controls, as long as the video is in either .mp4 and .ogg format, so we provide both.

2.2 View

To encourage browsing the collection we added a "other people from X" list beside the video player as YouTube does, and added a Google map of the earth with a pin for each video, because a simple list was becoming unwieldy as the collection grew. In both cases, we had to decide which of several geographic attributes of the subject to use (e.g. current location, where raised/schooled, etc.).

The main features of the user interface have been modified slightly based on experience (for example, allow user to hide or show subtitles). One big change (though not visually obvious) is that the video is now played in the browser (using the HTML5 video element) rather than an embedded video player. This is an example of how we took advantage of evolving technologies to make our project simpler and easier to maintain. Compare the two interfaces in Figures 1 and 2.
2.3 Controller

The biggest changes have been made to the controller. In 2006, we used PHP as the interface between the browser and the XML database. This setup was the best available at the time, but would be difficult to maintain in the long term. In 2011, we replaced the PHP with eXtensible Query Language files and eXtensible StyleSheet Language Transformation (XSLT) files within the eXist database engine (to generate the pages sent to client and to process the query results respectively) and now use the database to do the processing, which makes the project more compact and easier to maintain. These changes were made largely for technical reasons: to simplify the infrastructure, ensure maintainability and make the project easier to migrate, extend or duplicate.
3. Discussion

Adopting the ADDIE method for the development of our system presents both challenges (by making the design very user-dependent) and opportunities (by involving users in the development, hence engaging them in an experiential learning process). Indeed, the system that we are currently developing, and using in specific courses and for specific learning goals, has allowed us to reflect more deeply upon the implications that creating a PDC may have on learners and instructors. It is clear that the evaluation that is part of our development cycle is one of the key factors to properly address teaching and learning needs and to transform the system into a tool that will be easy to use, effective and efficient. Pedagogically speaking, by engaging learners in the development process, we take a “post-critical” stand (e.g. Selber 2004) and contribute to the development of critical and functional skills.

4. Conclusions

Our original identification of pedagogical priorities (transparent access to and interaction with video of individual’s natural speech) and the nature of the best solutions (e.g. TEI XML and standards-compliant output) were sound and have simplified maintenance and extensibility of the site. However, there are still constraints to our model. For example, if we want to support two or more subjects, we will have to make changes to the model, view and controller.

By establishing a sound model and keeping the three ‘concerns’ separate we have been able to modify the view, controller and data model smoothly. Changes to the model were modest and easily explained to the different people who independently updated the interface, replaced the controller and modified the dataset.

The site continues to meet the pedagogical objectives, and will reliably do so for years into the future. We expect the next technical migration or pedagogical extension to the project will be straightforward as we have a robust infrastructure and disciplined approach to setting the scope and priorities for the project.

5. Acknowledgements

Jamie Nay rewrote the controller. Patrick Szpak updated the user interface. Elizabeth Saint updated the markup and added to the collection. This project is funded in part by the Social Sciences and Humanities Research Council of Canada.

6. References


Abstract

This paper presents the results of a pilot study which aims to explore the possibilities of using 3-D online games in order to reinforce students’ foreign language acquisition and communicative competence at the A1 level (CEFR). The target group is made up of 16 students from the University of Cadiz. In order to analyse the impact of the students’ interaction and collaboration when playing 3-D online games, we have designed two different games. Both games are based on a role-play and built upon OpenSim. The latter permits us firstly, to trace back students’ behaviour and in-world interactions and secondly, to analyse student’s use of the target language. Additionally, by testing two different games, we are able to observe the pros and cons of each one and therefore compare their effectiveness.

Keywords: online games; virtual environments; foreign language learning; collaborative learning

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1. Introduction

In recent years there has been an increasing use of collaborative online games to enhance students’ foreign language acquisition by playing and communicating with other learners in the target language. This has been done either through the adaptation of popular commercial games (World of Warcraft, The Sims, Ragnarok Online) (Reinders, 2012) or through the specific design of educational games (Pulitzer Game) (Valencia, 2012). Nevertheless, most of the attempts to use collaborative online games in foreign language learning have been made with students from intermediate or higher levels, as these games normally require foreign language proficiency. Less research has been done in order to explore the effectiveness of collaborative online games to foster learners’ communication skills at beginner levels. The current pilot study therefore aims to address this lack and to explore some of the possibilities for designing collaborative online games to be used at the A1 level. The following questions are of particular interest to our research: What is the impact on students’ foreign language production when playing the designed online games? and what makes a game attractive for students and increases their interaction with others? Taking into consideration our students language proficiency, we are particularly interested in designing those tools which could easily be controlled by them and which would, at the same time, enhance their interaction and communication in the target language. Therefore we needed to design games which take into consideration some of the key-principles of foreign language learning. This means: provide learners with clear tasks and goals as well as regular feedback on their task performance, provide
learners with comprehensible and meaningful input (Berns, Gonzalez-Pardo, & Camacho, 2013; Doughty & Pica, 1986; Gass & Varonis, 1994; Long, 1996; Pica, 1994) stimulate learners production of language output (Schwienhorst, 2009) and negotiation of meaning (Pica, 1994) and, last but not least, facilitate noticing (Schmidt, 1990). The latter is particularly important to encourage learners to reflect on their use of the target language (Schwienhorst, 2009; Swain, 2005).

2. Method

2.1 Materials: Game-design

Bearing in mind the aforementioned aspects the current project aims to explore the potential of two different online games (Shopping-game and Hidden room-game) to increase students’ foreign language acquisition. Both games have been built up on the OpenSim and follow the same game-structure (see Table 1):

<table>
<thead>
<tr>
<th>Levels</th>
<th>Skills</th>
<th>Goal</th>
<th>Dynamic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Memory</td>
<td>Listening &amp; reading</td>
<td>to practice &amp; widen vocabulary &amp; grammar knowledge</td>
<td>individual</td>
</tr>
<tr>
<td>2 Role-play</td>
<td>Communicative competence</td>
<td>to foster vocabulary &amp; writing, communication skills</td>
<td>collaborative</td>
</tr>
</tbody>
</table>

Table 1: Game-structure

In both games, level 1 consists of a memory game that aims to provide students with the necessary vocabulary and language structures they need to perform the main game at level 2. Once the players have successfully passed level 1, they are allowed to proceed to level 2. Unlike level 1, level 2 is based on a role-play in which students need to collaborate on a common task. This common task consists in the case of the Shopping-game in performing virtual shopping and in the case of the Hidden room-game in reorganizing a virtual room, by putting a number of objects in their correct position. In both online games each player gets a different role and task to perform: while player A gets the information on what to buy or on which objects to put in the right order (Figures 2 and 4), player B gets the necessary tools (Figures 1 and 3) to perform the required task.

In order to perform the game-task successfully both players need to cooperate by communicating amongst each other via text-chat. During the entire game, players receive regular feedback on their performance. Additionally, each in-world action is automatically stored by the OpenSim-platform which allows us to trace back students’ use of the text-chat and their interaction with other players.

3. Discussion

3.1 Methodology: Empirical setting

The current pilot study was carried out with 16 students from the A1 level. Each game-session took between 45 and 60 minutes, depending on the students’ game performance. Additionally, each student played the game twice over a period of one week. In each game session students were asked to perform a different role. In this way each player performed once as player A and once as player B. In order to analyse the students’ interaction, when playing one or the other game, we divided students into two groups and asked each group to play a different game.

3.2 Data analysis and game-evaluation
The analysis of the in-world chat has shown that students’ interaction and foreign language production was in general, in both games, very high and fluent. Nevertheless, when students played the game for the first time it was player A who tended to use the text-chat more to interact with player B than player B did. This can be explained by the fact that the players understood from the game tools which they had been given, that player A was the one who had to guide player B throughout the game, whilst player B had to perform the required tasks. Nonetheless, it was conspicuous that once the players got familiar with the game-mechanism they started interacting much more amongst each other by exploring different strategies to perform the game faster and within the established time. The comparison of players’ interaction in the in-world chat during the first and second game sessions has furthermore shown that the more students get into the game the more they get used to solving language problems by paraphrasing, question rising, as well as clarification and confirmation requests. This was particularly noteworthy in the case of the Hidden room-game in which students need to use language much more precisely in order to perform the game task successfully than, for instance, in the Shopping-game (https://code.google.com/p/daifceale/). In terms of language acquisition, the results obtained from the analysis of the pre-and post-tests were very positive in both games: while almost none of the participating students’ passed the pre-test, more than half of them passed the post-test 1 while all students passed the post-test 2, significantly improving their vocabulary and writing skills. According to the individual feedback from the questionnaires students filled out at the end of the experiment, the Shopping-game received a slightly higher score in terms of evaluation than the Hidden room-game. Some of the reasons are that the Shopping game was perceived as much more dynamic and thus faster than the Hidden room-game. Nonetheless, in terms of language acquisition, students seemed to appreciate the Hidden room-game more than the Shopping-game, as it requires them to communicate, to negotiate and thus to use the target language more.

4. Conclusions

The results from the current pilot study have shed some initial light on the possibilities of using collaborative online games since the A1 level. Nevertheless, there is a need for further studies to be carried out with a much larger a diversified sample size and over a much longer period.

5. Acknowledgements

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Data and elicitation methods in interaction-based research

Françoise Blin
Dublin City University
Dublin, Ireland

Catherine Caws
University of Victoria
Victoria, Canada

Marie-Josée Hamel
University of Ottawa
Ottawa, Canada

Trude Heift
Simon Fraser University
Burnaby, Canada

Mathias Schulze
University of Waterloo
Waterloo, Canada

Bryan Smith
Arizona State University
Tempe, U.S.A

Abstract

Based on the principle that effective and sustainable CALL research requires multiple perspectives that emerge from empirical data collection and analysis using a mixed-method approach, the purpose of this symposium is to discuss data and elicitation methods of interaction-based research. The first part of the discussion will be dedicated to theoretical perspectives and conceptual frameworks grounding such research in the context of CALL. The second part will focus on data elicitation methods for learner-task-tool interactions at the computer; more specifically, it will emphasize quantitative and qualitative data collection and analysis by examining the product and the process of the interactions as well as the learner’s perception of these interactions. The last part of the symposium will consist of a discussion panel in which all six participants will weight strengths and limitations, successes and challenges, as well as lessons learned in light of their research experiences. By responding and integrating feedback from the audience, the discussion will focus on the ways in which a conceptual framework can guide researchers in producing sustainable CALL research methods, data and tools.

Keywords: theory of affordances; CALL ergonomics; complexity theory; persona; usability tests; eye-tracking techniques

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2. Introduction

The goal of this paper is to critically reflect on data and elicitation methods within the field of interaction-based research. Our reflection will start with an account of theories and conceptual frameworks before going into a more detailed discussion on specific methods and data that have been successfully used by several researchers. Hence, the main question that this paper seeks to address (i.e. what are the strengths and limitations of interaction-based research?) will be discussed in an interactive manner by including multiple perspectives and by opening the discussion to the audience in order to respond and integrate feedback from other scholars.
3. Theories and conceptual frameworks

3.1. The theory of affordances and CALL research

The theory of affordances (Gibson, 1977, 2013) has been at the forefront of debates within the Human Computer Interaction (HCI) community since the late 1980s (see for example Baerentsen & Trettvik, 2002; Kaptelinin & Nardi, 2012). Central to Interaction Design principles, the concept of affordance is also frequently called upon by educational technologists and CALL researchers (Conole & Dyke, 2004; Guichon, Bétrancourt, & Prié, 2012; Jauregi, de Graaff, van den Bergh, & Kriz, 2012). However, the concept of affordance is often ill-defined in the CALL literature. Furthermore, the realization and the emergence of affordances in technology-supported language learning environments are rarely analysed. Yet, they can provide useful information on human-machine and human-human interactions and therefore on language learning processes and trajectories.

The term 'affordance' was initially coined by Gibson (1979, 2013). Affordances are action possibilities offered by the environment to organisms: they are “what [the environment] offers the animal, what it provides or furnishes, either for good or ill” (Gibson, 2013, Chapter 8, para. 2). Possibilities for action in the environment are determined by both the objective properties of the environment and by the action capabilities of the animal (Kaptelinin & Nardi, 2012, p. 968). Affordances can only be realized “in the interaction between organisms and objects in the environment” and are thus emergent properties of the material world (Baerentsen & Trettvik, 2002, p. 52). In order to be realized, affordances need to be perceived by the observer, who must possess the required physical or mental capabilities to enact them. Adopting an activity-theoretical (Leontiev, 1978) approach to HCI, Baerentsen & Trettvik (2002) argue that the ‘objective features’ of the environment only become affordances when they are related to the actors’ (or users’) needs and activity (p. 54).

A theory of affordances for CALL should not be reduced to the technological dimension. Rather, it should relate the latter to educational and social affordances. Following Kirschner (2002), Lee (2009) defines educational affordances “as the relationships between the properties of an educational intervention and the characteristics of the learner that enable certain kinds of learning to take place” (p. 151). Discussions on social (or communication) affordances can be found in the literature associated with action-based and ecological approaches to language learning. For example, van Lier (2004) introduces the concept of language affordances, which he defines as “relations of possibility between language learners [that] can be acted upon to make further linguistic action possible” (p. 95).

The features or ‘objective characteristics’ of CALL environments, and in particular of those making use of Web 2.0 applications, offer educational, technological and linguistic affordances, which are distinct, yet interrelated. Some of these affordances have been consciously engineered by course designers; others will emerge as learners interact with objects, fellow students, or teachers. Using mixed methods (quantitative and qualitative) to trace and interpret the realization (or non-realization) of ‘designed’ and emergent affordances can assist us in enhancing our designs for successful language learning mediated by technology.

3.2. CALL ergonomics

What we define as CALL ergonomics is a methodological and theoretical process by which CALL research, in particular interaction based research, adopts a user-centred approach that is grounded in mediated activity theories (e.g. Raby, 2005). The basic precept of these theories is that human beings adapt, change, and learn through their interactions with machines, tools, or other human beings. In other words, these interactions are socially and culturally constructed (e.g. Leontiev, 1981; Rabardel, 1995; Vygotsky, 1978).

Considering the ubiquitous role played by computers in today’s society and within learning environments, we take the view that computers have become embedded cultural artefacts with which (and not from which) individuals interact naturally and regularly to perform common and routine tasks (e.g. Verillon & Rabardel, 1995; Selber, 2004). Thus, a better understanding of the role played by these artefacts is critical to the improvement of their design and, as noted by Raby (2005), their successful integration in language learning requires a holistic approach in order to scientifically understand what learners do when working with technology. Many questions still require empirical investigation: To what extent do these artefacts enhance or transform our basic human abilities, and in particular our abilities to communicate, interact, and work with others? What types of interactions occur when a learner is connected to a mobile or static device? How does the design of a tool, and/or a language-task, affect the learning experience? All these questions can be explored within an ergonomic research paradigm.
In addition, both while exploring the cognitive and functional effects of new systems, and the effects that new e-learning tasks may have on human cognition and behaviours, CALL ergonomics research not only places the user at the centre of the investigation, but it also focuses on the processes of learning rather than relying solely on outcomes. A focus on processes is crucial to better assess the learners’ abilities to cope with the needs of systems that are becoming more and more dynamic. For example, some ergonomics research on CALL systems, that appeared to be user-friendly at first glance, showed that learners were not always performing well meaning that the systems were not adapted to their needs (e.g. Hamel, 2012; Caws, 2013). Hence, by analysing a “work situation (or the association of a subject and a task in set conditions)” (Raby, 2005, pp. 184), data that are collected (physical and verbal behaviours, performances, and processes) can further be recycled into new learning processes and systems design.

In conclusion, CALL ergonomics offers many advantages to researchers and learners alike by focusing both individual and group interactions, and leading to the discovery of mechanisms (cognitive and functional) that may greatly improve learners’ experience with CALL.

3.3. Complexity science and CALL

Chaos Theory (Complexity Science/Dynamic Systems Theory) was heralded as the new science in the 1980s (Gleick, 1987; Williams, 1997) and soon took root in the (social) sciences. In 1997, Larsen-Freeman argued that language learning is best understood as a complex dynamic system, and the last decade has seen a wealth of complexity-scientific research in Applied Linguistics (e.g. de Bot, Lowie, & Verspoor, 2007; Ellis & Larsen-Freeman, 2006; Larsen-Freeman & Cameron, 2008). In this short paper, I will argue that viewing language learning as a complex dynamic system can give a new impetus to research in CALL and yield new insights into language learning.

A complex systems approach necessitates a non-reductionist, empirical analysis of learner data over time. Of course, observing what learners do with technology, how they learn and use the language(s), and with what outcomes is one of the major tenets of CALL research (Fischer, 2007). Observing the whole system of interacting (conglomerate) variables in context over a period of time, however, has not been a mainstay in CALL. Snapshot efficacy studies of technology use in language learning and pre/post-test designs with a one-off, short-term pedagogic intervention have all too often produced contradictory results. As a fruitful alternative, complex systems research combines the strengths of qualitative and quantitative methods—contextualized “thick descriptions” (Geertz, 1973) and the formal generalizability of inferential statistics.

Teachers and researchers have long known that language learning does not progress linearly, that conglomerate variables such as proficiency, motivation, and learning preferences are not static and undergo change because they interact with other variables over time. With a complexity-scientific approach, researchers can overcome the limitations of linear process metaphors and static variables, still seen in some CALL research; individual learners are considered in the context of the group, but the group’s data is not used to linearize or level.

Complex systems research requires longitudinal data of sufficient density and, ideally, data points at regular intervals. CALL is most suited to this approach to data gathering: e.g., students’ language practice in a VLE over the course of a semester, text iterations in a collaborative wiki, or chat data from an international project can all be used to analyse the changing variables in second language development (Verspoor, De Bot, & Lowie, 2011) and the data is saved unobtrusively and in an analysable format.

The analysis of data sets in the context of the nonlinear, dynamic, complex system of language learning is more challenging than a simplistic data reduction. However, to study attractor basins (states in which the observed variable can be found often) and repellor areas (states in which the variable has never been observed), the system’s sensitivity to initial conditions and its fractality, and the changing interaction of variables—all yield new, valid insight into language learning processes.

Because of its pedagogic innovation and the data gathering prowess of computers, CALL can make immense contributions to research discourses in applied linguistics, when it adopts a powerful theoretical research paradigm such as complexity science.
4. Discussion on methods and data

4.1. Learner persona

With the concept of personas, we are aiming at capturing and clustering similarities and differences among learners (see Colpaert, 2004; Levy & Stockwell, 2006). Once the similarities and differences have been determined, the learning process can be modelled to enhance the learner-computer interaction with an individualized, adaptive CALL environment. For instance, instructional alternatives with respect to learning objectives, tasks and media, or the use of learning tools can be provided. In addition, we then can decide whether this information is static and hard-wired into the learning tool, or is dynamic in the sense that it changes over time and adjusts to our learners as they develop over time. Possibly, this knowledge can also be negotiated with the learner and manipulated accordingly.

Personas are archetypal users of a learning tool that represent the needs of larger groups of users in terms of their goals and personal characteristics (Cooper, 1999). Although personas are fictitious, they are based on knowledge of real users; and thus some form of research that tracks the learners’ interaction with a CALL system must be conducted because a major virtue of personas is understanding how our learners most effectively use the learning tools that we construct for them. Therefore some research is conducted before they are written to ensure they represent real end users rather than the opinion of the person writing the personas. Otherwise, we might end up with a learning tool built for what we think language learners are like and do, rather than what the learners really are like and the way they use and interact with CALL programs. Alternatively, a learning tool can be designed with pre-defined personas and then tested and revised to confirm or reject the designer’s assumptions about the personas. Accordingly, an effective environment requires ethnographic user data gathered from both qualitative as well as quantitative research into learner assessment, usability testing, interviewing students, conducting surveys—all of these will determine in what ways we need to individualize instruction. For instance, we need to consider learner demographics that are important along with the design features that go with those. Naturally, the only time they really matter is when the demographics directly affect learner behaviour. The same applies to general learner preferences. The difference between personas must then be based on deeper issues, for instance, what learners do (actions or projected actions), and why they do them (goals and motivations) and not as much on who the learners are (see also Saffer, 2005). For example, a study by Heift (2002) identified different learner types based on their interactional patterns with the system inasmuch as this relates to system help options, feedback and, more generally, to system navigation, error correction behaviour as well as learner variables such as language proficiency. Results of studies of this kind make suggestions with respect to system design, such as help options, task types, and feedback and they tell us what areas warrant an individualized, adaptive CALL environment.

3.2. Usability tests

Usability is a core term in Human-Computer Interaction (HCI), and “how to measure usability is an important question in HCI research as well as in user interface evaluation” (Hornbaek, 2006, p. 79). Usability is a property conferred on any objects humans use for specific tasks. It has been formally described as “the effectiveness, efficiency, and satisfaction with which specified users can achieve goals in particular environments” (ISO, 1998, p. 2). Bevan (1995) refers to usability as “quality in use” which illustrates well its process-oriented nature. Quality attributes such as learnability (time to learn), efficiency (speed of performance), memorability (retention over time), (rate of) errors (by users) and (subjective) satisfaction (Nielsen, 1993; Shneiderman, 1998) are measurable aspects of usability.

Emergent technologies such as video screen capture (VSC) and eye-tracking (ET) enable objective measures of usability to be devised. In the context of CALL research and design, VSC and ET have indeed proven to facilitate the observation in real time, and in a less intrusive manner, of the learner-task-tool interaction at the computer (Fisher, 2007; Hamel, 2012; Smith, this article). A common method employed when designing usability tests is to select representative users (based on user profile analyses, “persona” cf. Heift, this article) as well as representative (micro and macro) tasks and pay attention to successes achieved and difficulties encountered with the user interface (e.g. a CALL tool, resource, or environment) during the interaction process.

In order to obtain a more valid measure of usability, a user interface should be tested iteratively and over time, with a focus on learning and retention attributes (Hornbaek, 2006). The user experience has to be taken into account when measuring usability and one of its prime indicators is user satisfaction. Evaluation criteria will “go beyond” usefulness and likeability as a user interface must be considered “acceptable” in the eyes of the users, who must clearly see its value, potential and be able and willing to use it, and make it part of their current
The most common method employed to measure satisfaction is through post-use questionnaires and interviews. Satisfaction can also be assessed during use (e.g. while talking-aloud). Talk-after protocols (stimulated recalls) constitute another method that can provide information on the quality in use, helping disambiguate certain aspects of the interaction (e.g. silences, hesitations, decisions).

Correlations between measures of usability, objective and subjective, quantitative and qualitative, can be made to gain a deeper understanding of the interaction—e.g. how efficiency contributes to effectiveness or how learnability influences satisfaction. Usability tests are context sensitive, and their results should put forward recommendations for improving aspects of the user interface that do not meet usability requirements originally formulated as goals. Conditions for a sustainable integration into the users’ natural routines, i.e. “normalization” (Levy, 2013) should also be identified.

Finally, conducting usability tests in the context of CALL can serve as an effective method to elicit information about learner behaviour, shed light on the process of the learner-task-tool interaction, and ultimately better scaffold this process (Hamel, 2013).

3.3. Eye-tracking in CALL research

Eye tracking technology has been employed as a tool in psychological L1 reading research for over 100 years and has recently gained currency in SLA studies, including those in a CALL context. In eye tracking an individual’s eye movements are measured, which allows the researcher to know where and for how long a person is looking at any given time. It also shows the sequence in which their eyes are shifting from one location to another (Poole & Ball, 2006). Eye movements during reading are used to infer moment-by-moment cognitive processing of a text by the reader (Just & Carpenter, 1980). These eye movements are considered empirical correlates of processing complexity, which allow us to make inferences about perceptual and cognitive processes.

The two most widely used measures of eye movements are eye fixations and saccades. Eye fixations are those moments when the eyes are relatively stationary and reflect when information is being encoded. It is eye fixations that allow readers to extract important and useful information about the text. Saccades are the fast movements of the eyes between fixations. Up to now, eye-movement records in L2 research have been used to investigate two major areas: (a) how L2 speakers recognize spoken words in each language; and (b) whether monolingual and L2 speakers process various syntactic sub-processes similarly during sentence comprehension tasks (Dussias, 2010).

As CALL researchers strive to incorporate multiple theoretical perspectives, data collection modalities and methodological techniques, eye-tracking technology presents itself as a viable and potentially powerful tool. In line with this “multiple modality” approach – researchers such as O’Rourke (2008) have recently offered eye tracking as a richer source of what learners actually do – or in this case view – during SCMC interaction. And, as pointed out by Godfroid, Housen, & Boers (2010), eye tracking as a data collection technique seems less likely than, say, think aloud to interfere with the participants’ cognitive processing. Also, since it is an online measure, it may be more robust in some ways than retrospective techniques such as stimulated recall.

There seem to be several immediate applications that eye-tracking can offer CALL. Aside from usability testing in a human-computer interaction environment, we are now seeing the application of eye tracking in human-human interactional settings as well. We can use eye tracking to confirm or disconfirm the efficacy of other, more established data collection measures in SLA (Smith, 2012) such as stimulated recall and think-aloud. Indeed, learner eye-tracking records might help inform some of the contentious debates in SLA, such as those surrounding the notions of attention and noticing. For example, questions like “What are learners likely or able to attend to in corrective feedback?” Only a handful of published studies have so far employed eye tracking to explicitly examine L2 noticing (Godfroid, et al., 2010, Kuhn, 2012; O’Rourke, 2008, 2012; Smith, 2010; Smith & Renaud, 2013). Each of these studies suggests that eye tracking is suitable to use as an instrument for measuring the noticing of written text.

5. Conclusions

As seen through the eyes of theoretical concepts and various methods and data described herein, interaction-based research is a multi-faceted area of research. This paper aimed at giving an overview of specific theories and methods in order to solicit a broader discussion on the potential of the field, as well its limitations.
Within the wider CALL context, our paper has served to illustrate the extent to which a strong conceptual framework, such as the one describe here, can guide researchers in producing sustainable CALL research methods, data and tools.

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Towards a sustainability framework for large collaborative CALL projects

Françoise Blin  
Dublin City University  
Dublin, Ireland

Juha Jalkanen  
University of Jyväskylä  
Jyväskylä, Finland

Peppi Taalas  
University of Jyväskylä  
Jyväskylä, Finland

Mairéad Nic Giolla Mhichíl  
Dublin City University  
Dublin, Ireland

Abstract
In this presentation, we present and discuss a sustainability framework that was developed in the context of the SpeakApps project, which was funded with support from the Lifelong Learning Programme of the European Commission. The project consortium aimed to create an open source online platform, applications, and pedagogies to practice oral skills online. From the outset, it set out to develop a sustainability framework, which was then used to devise and implement a sustainability plan specific to the SpeakApps environment, products and services.

The framework draws on ecological views of the world and language, and on systems theories. It is a tool to help project teams think beyond the immediate results of their project, decide what results and outcomes should be exploited after the end of the funded period, formulate strategies to ensure the sustainability of these results and outcomes, and develop robust exploitation plans and business models that will guarantee the sustainability of project results. The framework also proposes a set of sustainability indicators that can be used to measure how well a project team is doing with regards to the exploitation of its results, with a particular focus on professional and pedagogical development, community building, platform and tools, and business models.

Keywords: Sustainability; large collaborative projects; sustainability indicators

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1. Introduction
Consortia involved in large collaborative CALL projects face many challenges with regards to the sustainability of their project beyond its completion. These challenges are often seen as primarily financial and ‘market-oriented’. Issues of project management and quality insurance, stakeholders’ involvement and participation, institutional support, and dissemination are also given a high priority as evidenced by the numerous guidelines provided to project co-ordinators (see for example the checklist for project coordinators, Lifelong Learning Programme 2007-2013, Leonardo da Vinci).
However, sustainability is a complex concept that gives rise to many definitions and interpretations. Although they are likely to diverge in their particular approach to sustainability, environmental and social scientists usually agree that sustainability “does not mean that nothing ever changes” (Sustainable Measures, http://www.sustainablemeasures.com/node/28). Nor does it mean sustained growth (op. cit.). Our approach to sustainability draws on ecological views of the world and systems theories. A system is a set of interacting and interdependent components that form an integrated whole, bigger than its parts, and can be closed or open, self-organised and/or self-sustainable (Haken, 2008).

Language is increasingly seen as a complex dynamic system, operating in an environment that is itself part of a complex system (Larsen-Freeman, 2012). The emergence of new social and learning spaces force us to rethink language teaching and learning in systemic and ecological terms. Emerging techno-pedagogical designs for language learning are mindful of the situatedness of language and language practices. They place languaging (Linell, 2009) and agency at the core of teacher and second/foreign language education (Jalkanen & Taalas, forthcoming). Teacher and learner agency is key to the sustainability of many large CALL collaborative projects whose outcomes constitute an open system: the future of the system is contingent, not only on its financial self-sustainability, but also on the teacher and learner community’s capacity over time to direct and to contribute to the evolution and transformation of the platforms, tools, and pedagogical artefacts that have been developed by the consortium.

This paper presents a sustainability framework that has been developed in the context of the SpeakApps project, which was funded with support from the Lifelong Learning Programme of the European Commission (http://www.speakapps.org).

2. Defining sustainability objectives and strategies

The SpeakApps sustainability framework is a tool to help project consortia think beyond the immediate results of their project. Project outcomes were divided into three distinct, yet interrelated, categories: pedagogy and professional development, community building, and platform and tools. Strategies for the sustainability of results in the pedagogy and professional development category seek to provide the basis for the improvement of language teaching and learning beyond the contexts of those initially involved in the project. Strategies in the community building category not only concern community maintenance, but also the community’s capacity for future transformation and creativity. Finally, strategies for the sustainability of the platform and tools aim to enable the maintenance and further development of a platform or tools so that they continue to respond to the needs of the target audience beyond the completion of the project. To be successful, the strategies for ensuring the sustainability of the project exploitable results need to be supported by a robust business model.

Our sustainability framework does not seek to provide for the maintenance of products and services that are no longer relevant to the intended users, nor for the preservation of particular organisational structures and processes. It is concerned with the self-organised continuation of the project and with the self-sustainability of its operations, activities and communities as they evolve over time and across multiple spaces. It outlines issues and questions that can be used to frame a sustainability and exploitation plan in context.

3. Sustainability indicators

Sustainability indicators can be used to measure how well a project team is doing with regard to the exploitation of its results. They can also assist project partners to make informed decisions regarding the implementation of short, medium, and long-term solutions to emerging sustainability issues. Indicators are determined by the number and types of artefacts (e.g. resources and materials for the language classroom or professional development) being used, and by the exploitation objectives and planned activities. For example, the number of new artefacts (e.g. resources and materials for the language classroom or professional development) being used defines the basic needs for the resources and materials available to users, whereas the level of engagement and creativity exhibited by users of the system. Similarly, the number of new users measures the growth of the community in terms of membership and may help redefine the basic needs for the whole system. Sustainability indicators have been developed for the categories of pedagogical and professional development, community building, platform and tools. A fourth category of indicators (business model) can be used to assess the financial viability and market for the products and services.
4. Conclusions

The framework developed as part of the SpeakApps project focuses project-partners to consider exploitation beyond financial or market-oriented considerations of the exploitable results. It provides a coherent and consistent template for partners to discuss and finally agree a strategic exploitation plan, which will clearly identify and elucidate:

- Exploitable project results
- Exploitation strategies (e.g. consolidating, multiplying and mainstreaming)
- Partners’ and end-users’ exploitation interests and planned activities
- Plan for end-of-life of exploitable results and outcomes
- Business model
- Evaluation of exploitation plan implementation

Sustainability issues are at the core of any language related project seeking to provide medium and long term online solutions to identified educational problems and to enable the transformation of teaching and learning practices that are in line with the aspirations of European states with regards to the development of the knowledge society. However, specific CALL focused frameworks to assist project partners in their endeavour to develop sustainable online educational products and services are few and far between. The sustainability indicators as outlined in this paper form the basis for project quality enhancement and review, and have the potential to be applied in other projects with similar aims.

5. Acknowledgements

The SpeakApps project (http://www.speakapps.org) has been funded with support from the Lifelong Learning Programme of the European Commission. This paper reflects only the views of the authors, and the European Commission cannot be held responsible for any use which may be made of the information contained therein.

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Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Does mobile learning need to move?

Isil Boy  
Yildiz University  
Istanbul, Turkey

Gary Motteram  
University of Manchester  
Manchester, UK

Abstract

The joke has been made before about the book being an unbreakable mobile device, and indeed you could go back further and consider the slate as a mobile writing device. It is clear, however, that both of these technologies as cultural artefacts had impacts both on what and how people learned and the argument about the role of books still continues. Laptops or netbooks, particularly modern ones are highly portable and have good connectivity. But can we see these as mobile devices? If we use any portable device inside the classroom walls do we need to use it in a certain way for it to be called 'mobile learning'?

With learners coming into schools, colleges and universities with increasingly smart technologies and schools and ministries of education, colleges and universities around the world beginning to add tablet PCs to the mix of technologies in schools, this paper explores through a series of small case studies in Turkey and the UAE how teachers see and use mobile devices in language learning. It considers how they are using them and how this might differ from the suggested practice described in the literature and then considers what might be the implications for mobile technology use in classrooms.

Keywords: mobile learning; mobile device; tablet; smart technology; case study

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7. Introduction

Kukulska-Hulme and Traxler (2005: 180) have defined mobile learning as, “essentially situated, spontaneous, personalized, and inclusive.” Although mobile learning is regarded by some as an extension of e-learning, it is also said to provide more flexibility to learners in terms of time and place of access to learning material, more flexibility in communication, as well as altering the relationship between the learner and learning that is undertaken. Some would argue further that mobile learning is a new way of learning. It is increasingly understood that in classrooms learners and teachers are the co-creators of knowledge, echoing Vygotsky’s concept of the Zone of Proximal Development (1978: 86) and Wood, Bruner and Ross’s notion of scaffolding (Wood, et al., 1976). Learning now is not restricted to books, or DVDs or computers or even an Internet connection. Material can be downloaded on to a mobile device and accessed at will when on the move and updated when a connection to the Internet is restored.
Mobile technologies, whilst increasingly normalised (Bax, 2003, 2011) in society, have generally been on the peripheries of education with some small-scale localised studies by early adopters in higher education. In most cases, certainly in schools, learners are not encouraged to use mobile devices in class. However, the recognition of growth in mobile use and the increasing recognition that this potentially opens up new avenues for learning has led many institutions worldwide to begin to integrate these technologies, currently mainly tablets, into the curriculum (Lister et al. 2013). According to Liak (2011) the omnipresent availability of tablets as a mobile learning device enables users to search for information on the Internet, and share ideas on online platforms; hence, tablets help teaching and learning in today's interconnected world. Liak (2011: 8) believes that "mobile learning is about changing the way we teach with the way students best learn." This paper then gives us some insights into what teachers are trying to achieve in two countries where tablet technologies in the shape of iPads and Androids are being systematically introduced.

This paper reports initial findings from a small-scale exploratory study that aims to gain insights into this trend by examining teachers’ use of mobile technologies in seven EFL classrooms. Because much of the early literature on mobile learning has focused on learning in the wild, what Jarvis (2013) has described as MALU this paper focuses on the wholesale introduction of mobile technologies into schools and universities. It will focus on the teacher perspective because they are so often ignored when it comes to the introduction of new technologies. Factors affecting teachers’ use of mobile technologies in teaching will be investigated, and categorised accordingly.

8. Method

2.1 Case Study

Initial research questions:

1- How do teachers see and use mobile devices in language learning?

2- What are the factors affecting teachers’ use of mobile technologies in teaching?

3- What are the roles teachers believe mobile technologies should have in teaching and learning?

This research is a case study, which stresses elaborate contextual analysis of a restricted number of circumstances and their relationships (Spring, 1997). We interviewed seven teachers working in private primary schools, two state schools in Turkey and a college in the UAE and adopted an unstructured approach as we “have a clear idea of the purpose of the observation, but not so clear about the detail.” It is claimed that interviews give chance to staff to express their opinions about the study being carried out. (Bell 2010, Thomas, 2009). Because of difficulties accessing teachers for face-to-face interviews we have used semi-structured email interviews. Meho (2006) states that semi-structured e-mail interviews involve multiple e-mail exchanges between the interview and the interviewees. E-mail interviewing as an asynchronous communication is advantageous since it enables the interview think thoroughly before answering the questions, and edit them if necessary (Curasi, 2001).

After conducting the interviews, we reduced the data into meaningful categories, and then interpreted according to the relationships that come out as a result of data reduction. As we are aware of the fact that qualitative data analysis evolves during the research, we analysed the interviews critically and interpreted them carefully since a
good qualitative research brings to light coherent themes, meaningful categories, along with new notions (Suter, 2012).

9. Discussion

The seven teachers have been involved in teaching from 2-28 years, but have mostly only been using tablets in the classroom for 1 year (5 teachers), 1.5 years (1 teacher) and 3 years (1 teacher). However, that does not mean that the more experienced teachers did not have any prior experience of using technology to support their teaching and recognized mobile technologies as a part of the historical development of the use of technology in the classroom.

Five of the teachers are using iPads and two using Android tablets as a part of the Turkish Ministry of Education funded Fatih project (http://fatihproject.com). Teachers are working in Turkey or the UAE, six out of seven are of Turkish origin. The final teacher is originally from the UK.

While in the data we see some instances of these technologies being used as creative tools and in one case outside of the classroom mirroring previous research in other subject areas (Purcell et al. 2013), in most cases, in the limited data we have analysed so far, teachers are using tablets in similar ways to other computer technologies: as tools to teach the curriculum, to practise language, particularly vocabulary, and to motivate learners. There are inevitable issues around the technology itself in some of the contexts, with the teachers describing poor performance of the tablets and control of access to the internet and online sites, in the UAE the iPads are being introduced as the sole classroom technology with other traditional technologies banned. Some of the teachers talked about the difficulties of managing the tablets in the classroom with the learners only interesting in playing games, one teacher talks about the harnessing of those same games to stimulate language practice.

10. Conclusions

Initial findings from this study seem to suggest that, perhaps not surprisingly, tablet computers are being used in schools in similar ways to the other implementations of technology in the language classroom. If we consider the possibilities for the use of mobile technologies that are discussed in the literature, we need to work more on making sure that teachers receive effective training to understand what the potentials are of such technologies and the powers that be need to make sure that access to the Internet makes this kind of activity possible.

11. References


Global perspectives on Computer-Assisted Language Learning
Glasgow, 10-13 July 2013

A comparative study of Italian learners’ mobile phone usage inside and outside the classroom

Billy Brick
Languages Centre Manager
Coventry University, UK

Tiziana Cervi-Wilson
Senior Lecturer
Coventry University, UK

Abstract
This paper reports on two studies that aimed to investigate how language learners, taking Italian on the University Wide Languages Programme (UWLP) at Coventry University, use their mobile devices to support their language learning. Approximately 300 learners taking Italian at levels 1, 2 and 3 completed an on-line questionnaire. The first section of the questionnaire asked learners to indicate the devices to which they had access. The second section then aimed to gain an understanding of the frequency with which they used their devices to support their language learning. To capture more in-depth data referring to specific usage of their devices in the four skills: reading, writing, speaking, and listening, several questions based on the five-point Likert scale were asked. Learners were also asked to explain how they used their devices to access dictionaries and thesauruses. The tutor gathered further data from learners who were observed using their digital devices autonomously in the classroom. To triangulate the study, semi-structured interviews were carried out with a sample of the participants.

The study found that the use of digital devices to support their learning was widespread, but tutors were unable to recommend appropriate apps and that they used their devices autonomously, unintegrated with their modules. Learners expressed a desire for the integration of mobile language learning resources with their existing coursebooks and online learning materials. Language tutors need to keep apace with the technological developments so that they are well poised to offer their learners informed advice.

Keywords: Language learning; MALL; learner autonomy; CALL

1. Introduction
The increasing sophistication of mobile devices has been accompanied by a concomitant increase in the variety and number of third party applications available to assist in the learning of languages. These vary from simple vocabulary learning applications to complete language learning courses. Mobile devices provide significant opportunities to help learners become more autonomous and also have the potential to change the delivery of teaching and learning in higher education. Indeed, learners are already using their own devices to support their language learning both inside and outside the classroom, but there is little empirical evidence showing exactly how learners use their devices to support their learning. Without this evidence educators will be unaware of how their learners are utilising their devices and be unable to offer informed advice regarding the optimal way in
which mobile devices can be successfully integrated into a language learning module. This, in turn will influence universities’ mobile phone use policy, which needs to balance the problems associated with the technology with the educational opportunities they present. Despite the many varieties of mobile devices and increasing potential offered by mobile learning, it is still a relatively new technology and is yet to be fully integrated into teaching and learning (Traxler, 2007).

Chinnery (2006) surveyed the state of mobile language learning and identified technical problems and limitations such as small memory size, low resolution screens, poor audio quality and slow internet connectivity. However, as Godwin-Jones (2011) pointed out, many of these issues have now been overcome and today’s mobile phones include many of the advanced features associated with mini computers.

Kukulska-Hulme’s (2012) study focussed on producing conceptual frameworks to enable educators to interpret emerging learner practices, however the sample was relatively small and the emphasis was on the time and place the learning took place. This study involved a large sample of 174 learners across three year groups and captured detailed data regarding the device they owned, specific apps and other features learners accessed to facilitate their learning and learners’ views regarding the advice they expected to receive from their tutors. Against this background, the purpose of this research is to answer the research question: “How do language learners use their mobile devices to support their language learning?” More specifically, this research has three objectives:

a. To establish the specific ways in which users use their digital devices inside and outside the classroom;

b. To establish which specific sites and apps they access;

c. To explore the ways in which learners would like to use their digital devices.

The paper has four parts: first, it reviews the extant literature regarding mobile digital devices and language learning. Then the research methodology is presented and the data analysis techniques are discussed. Next, the results are presented and discussed. Finally, a conclusion is presented.

2. Method

The participants in the project were 300 undergraduate learners, from various L1 backgrounds, taking Italian at levels 1, 2 and 3 on the University Wide Language Programme (UWLP) during 2011-12 and 2012-13. These students were studying a variety of different degree programmes across the University. In the first part of the study, learners, who were observed using their digital devices in the classroom, were asked to explain how they were using them to support their language learning. They were also asked to complete an online questionnaire, which was divided into three parts. The first section asked learners to indicate the devices they owned and to state how, when and where they used them. The second section then aimed to gain an understanding of the frequency with which they used their devices. In order to capture more in depth data referring to specific usage of their devices in the four skills of reading, writing, speaking, and listening, several questions based on the five point Likert scale were asked. Finally, learners were invited to explain how they used their devices to access dictionaries, translators and thesauruses. To triangulate the study semi-structured interviews were carried out with a sample of the participants, in which more detailed questions were posed. As recommended by Arksey and Knight (1999), both researchers were always present as a means of cross-checking and producing a more complete record.

The following section is a brief summary of the questionnaires and evaluations collected from the participants both in the classroom and via classroom observations. The combination of regular dialogue and discussion with the students, questionnaire data, and focus group observations provided a diverse variety of data covering a wide range of opinions about their usage of their devices.

3. Discussion

The number of learners stating that they owned a smart phone/digital device increased from 78.3% in 2011-12 to 91.1% in 2012-13. This is a significant increase in a 12 month period.

In response to the question “Do you use any apps (e.g Apple or Android) on your phone to support your language learning?” 22.3% of 2011-12’s cohort stated that they did, whilst this figure increased to 35.6% in 2012-13. However, some of the questionnaire results and comments made by participants in the focus group suggested that learners were not always conscious of using apps. For example, several participants stated that
they used Google Translate on a regular basis but it remained unclear whether they used Google Translate in a web browser or on the Android or Apple app.

Participants were also asked to indicate whether they use any of the online translation programs to support their foreign language learning. In 2011-12, 81.7% stated that they used Google Translate to support their language learning. This increased to 88.1% in 2012-13.

There was unanimity amongst both cohorts in the focus groups when they were asked how they selected a suitable app for their specific language. They all stated that they relied on the scoring system on the respective app stores but would prefer tutors to recommend apps to them.

Many learners complained about the poor battery life of their device and slow wireless connection on campus. Very few learners used their digital devices for listening to the news or reading newspapers in their target language.

4. Conclusions

Over 90% of students stated that they owned smart phones/digital devices and 35.6% utilised them for language learning in 2012-13. They used these devices in a variety of different ways to support their language learning. They tend to use Google Translate for looking up individual vocabulary items rather than electronic dictionaries. Widespread use is made of mobile phones/digital devices to support language learning but many regard them as having a poor battery life. Tutors need to be familiar with the apps available in the language they teach so that they can recommend suitable apps to their learners.

5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

The online-community culture in massively multiplayer online role-playing games affects language learners’ use of vocabulary learning strategies

Julie Bytheway
Victoria University of Wellington
New Zealand

Abstract

Digital games dominate entertainment as a USD 50 billion industry with approximately 500 million players. Millions of language learners use off-the-shelf games as informal learning environments. Massively multiplayer online role-playing games (MMORPGs) are rich vocabulary learning contexts that support an online-community culture that requires interaction, increases motivation, decreases anxiety, rewards curiosity, encourages creativity, and demands cooperative and autonomous learning. Within these inclusive, nation-less online communities, gamers form communities of practice that influence vocabulary learning. How is the MMORPG online-community culture affecting learners’ use of vocabulary learning strategies?

This case study of players of World of Warcraft® (a popular MMORPG with over 12 million subscribers) was instigated in response to informal reports of vocabulary gains from gamers at universities in New Zealand and the Netherlands. Using research processes inherent in Grounded Theory, information was integrated from three fields of study: MMORPGs as learning contexts, vocabulary learning strategies, and online cultures. Data was collected from extant MMORPG texts and observations of, interviews with, and elicited texts from a criterion sample of six ESL experienced players of World of Warcraft®. Through constant comparative analysis, patterns and processes emerged to explain how the MMORPG in-game culture affected participants’ vocabulary learning strategies. Findings were compared to Gu’s (2005) model of vocabulary learning strategies in contexts, which was adapted to incorporate MMORPG community culture. The results highlight the need to value how the MMORPG community culture affects ESL learners’ use of vocabulary learning strategies and argue for study into autonomous language learning in digital games.

Keywords: massively multiplayer online role-playing games; World of Warcraft; vocabulary learning strategies; online-community culture

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1. Introduction

Vocabulary is essential for second language acquisition and can be acquired explicitly and implicitly (Nation, 2001; Schmitt, 2000) in formal and informal learning contexts (Brown, 2007; Ortega, 2009). Vocabulary learning opportunities in passive media (television) are valued, but use of passive media is decreasing and use of
Language learning contexts are changing.

MMORPGs are worth examining as language learning contexts because they are positive learning environments (Delwiche, 2006; Steinkuehler, 2007), provide opportunities for meaningful communication (Thorne, 2008) and are played by millions of people (Yu, 2009). MMORPGs are digital strategy games played online by thousands of players simultaneously in real-time. Players complete collaborative tasks, trade items, explore, and interact for social and in-game-business purposes (Máyára, 2008; Yee, 2003-2006). Players follow rules the game rules and ‘unwritten’ cultural rules known to the game community (Corneliussen & Retterberg, 2008b).

Gu (2005) and Nation (2008) assert that vocabulary learning processes can to a considerable extent determine overall success or failure of second language acquisition. Strategies are activities learners consciously choose to regulate their language learning (Griffiths, 2008). Context and cultures affect learners’ use of vocabulary learning strategies (Duarte, 2010; Eyres, 2007; Nyikos & Fan, 2007) and studies show that MMORPGs could be used as second language vocabulary learning contexts (deHaan, Reed, & Kuwada, 2010; Piirainen-Marsha & Tainio, 2009; Thorne, 2008).

MMORPG culture could affect learners’ use of vocabulary learning strategies. In MMORPGs, collaboration is essential (Delwiche, 2006; Godwin-Jones, 2005; Nardi & Harris, 2006): players create meaningful relationships (Shen & Williams, 2010; Thorsen, 2009; Yee, 2003-2006), have a lot in common, rapidly form bonds of trust (Yee, 2003-2006), and belong to an inclusive culture (Gee, 2007). MMORPGs are complex social systems where players learn how to know and how to know-how-to-be (Corneliussen & Retterberg, 2008a), learning skills (Levy & Stockwell, 2006) to participate in and belong to a community of practice (Wenger, 1998).

This study explores how online culture affects second language learners’ use of vocabulary learning strategies in an MMORPG learning context.

2. Method

This qualitative case study used research processes inherent in Grounded Theory (Glaser & Strauss, 1967). Ethical approval was obtained. A criterion sample of six male gamers, aged 20 to 30, recruited from Victoria University of Wellington, volunteered. All participants used English as a second language and had an IELTS overall band score of 6.0 to 7.5. The participants had played MMORPGs for at least five hours every week for more than four years and played several high level characters in World of Warcraft®. Data was collected from 30-60 minute observations of gameplay, 30-60 minute semi-structured interviews, elicited email texts and extant World of Warcraft® texts. Observations and interviews were digitally recorded. During interviews, participants were asked to express personal opinions, explain ideas further, give specific examples, and share significant stories. Collecting, transcribing, coding and sorting data, reviewing literature, creating mind maps and writing memos continued throughout the research process. Constant comparative analysis (Glaser & Strauss, 1967) was used to determine similarities and differences and allow patterns, process and themes to emerge. To minimize personal bias, inter-rater and member checks were completed.

3. Discussion

Participants use variety of vocabulary learning strategies that are affected by the MMORPG culture. Participants wanted to belong to the MMORPG community and interacted with other players: “but you can learn…how to talk to them | and…how to be same to them | and not act like maybe foreigners”. Participants were aware of hierarchical structures, which restricted their use of the strategies requesting/giving explanations and receiving/giving feedback. “You can ask the guild for help to like explain something| but if you are a higher level that would be weird”. Participants explained the need to learn independently: “people who play first time should mostly level up by themselves”. Therefore, participants do not rely on strategies such as requesting/giving explanations, and receiving/giving feedback, but combine them with strategies, such as reading in-game information/pop-ups, guessing from context, and using word to learn word use. MMORPGs encourage curiosity, which affected the use of the strategies interacting with players, reading in-game information/pop-ups and looking up words in dictionaries/Google. Cooperative interaction is an inherent part of playing MMORPGs, which affected participants’ use of the vocabulary learning strategy interacting with players.
Gu (2005) maintains that only after analyzing the learning task and context, and available resources, do learners select and use strategies. Gu’s (2005) model was adapted to show how culture in MMORPGs affect learners’ vocabulary learning strategies. The MMORPG culture encourages interaction, curiosity, and autonomous learning, which affects the use of the vocabulary learning strategies requesting/giving explanations, receiving/giving feedback, reading in-game information/pop-ups, guessing from context, using word to learn, interacting with players, reading in-game information/pop-ups and looking up words in dictionaries/Google.

4. Conclusions

This study includes limitations: small sample size, possible behaviour change from observations, information change from interviews, and unreliable reporting. However, MMORPG culture affected how gamers used vocabulary learning strategies. Participants of this study used vocabulary learning strategies within MMORPGs to manage their learning autonomously, without teachers intruding or directing their learning. Perhaps it would do us good to remember Rubin’s (1975) advice, and focus on discovering what good language learners do, and use their successful practices to shape our teaching practices. Teachers should encourage gamers to share their experiences of vocabulary learning within MMORPGs with other learners to raise learners’ awareness of the variety of vocabulary learning strategies and encourage learners to transfer vocabulary learning strategies to other contexts.

Teachers need to dispel negative gaming myths and inform learners about how vocabulary learning strategies can be used in MMORPGs. For many learners, information about how MMORPGs can be used to help vocabulary learning may be valuable and empowering.

This study skims the surface of many aspects of MMORPGs as contexts for vocabulary learning strategies. Many ideas for further research to explore the effects of aspects of MMORPG contexts on language learning, vocabulary learning, and learning strategies and vocabulary learning strategies are yet to be explored.

5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Nuancing language to inform a communicative presence within asynchronous online learning communities

Wendy Chambers
University of Calgary
Calgary, Canada

Abstract

Communicative presence is proposed as a new language-based concept in the field of distance education and is considered as emergent and co-constructed within globally situated online learning communities. A mixed methods study was conducted within four online asynchronous learning communities for the purpose of investigating communicative presence and building an evidence-based model of communicative presence. Three data sources for triangulation were examined: text-based threaded discussion forum postings; an online interview with participants, including the instructor; and an e-survey administered to learners. Social network analysis was used to identify patterning in the communicative interactions of the learning community. Selected text-based communications representing the beginning, middle, and end stages of each course were analysed using phasal analysis to gather sociolinguistic evidence to inform the formation and evolution of communicative presence. Interview data was analysed to identify emergent themes reflecting participants’ perspectives on their online experiences. The patterning of communicative interactions together with the sociolinguistic evidence and perspectives of the participants contributed findings to explain how individuals nuance language to inform a communicative presence via its constituent elements: digital capital, digital identity, sociocultural sensitivity, digital literacy, and communicative e-strategies. Individuals’ language use impacts the nature of social structuring and positionality within the communicating community context, and contributes to group gnostology that informs the social norms for communicating within the community. Communicative presence is informed by the nuancing of language within contexts of situation.

Keywords: asynchronous communication; distance education; communications linguistics; phasal analysis; social network analysis; online presence

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1. Introduction

As new communication technologies emerge and become a routine part of our personal and professional lives, we are challenged to present an image of self to others and to interpret the identity of others via electronic discourse. Communicative presence is proposed as a new language-based concept in the field of distance education: it is the overall realization of the online persona through engagement with others. The impact of online interaction for presenting and interpreting identity from communicative presence is growing in importance, particularly in the field of distance education, where courses often attract an international audience of learners who contribute diverse social, cultural, and linguistic capital.

This paper presents the major tenets of a mixed methods study investigating the language-based concept of communicative presence for the purpose of building an evidence-based model. The following research questions guided the study:

1. How does the use of language realize a communicative presence in a globally situated online learning community?
2. What are the distinguishing features of communicative presence?
3. How does participation in an online community shape the evolution of communicative presence?

2. Method

2.1. Data collection

Data was collected from four online professional development courses populated by pre- and in-service English language teachers. Twenty-two participants granted informed consent, and each contributed diverse social, cultural, and linguistic capital (Bourdieu, 1986, 1991). Three data sources for triangulation were examined: an e-survey, discussion board postings, and focus groups and interviews conducted with both learners and their instructor. The e-survey administered to learners using SurveyMonkey collected personal and professional demographic information, information about the participants’ knowledge and experiences with other languages and cultures, as well as their perceived skills with technology and online learning. Text-based threaded discussion forum postings representing the beginning, middle, and end stages of each course were collected, mapped, and analyzed via social network analysis. In addition, the same postings were analyzed via phasal analysis to investigate language use to understand how individuals position themselves within the community and communicate with others in a way that attracts or repels responses. Online interviews and focus groups conducted with the research participants provided perception checks of the discussion board contributions by eliciting responses to semi-structured questions about the communication strategies and decisions individuals made as they interacted with their online peer group.

2.2. Data analysis

The text-based discourse produced in the discussion board fora of each course was examined by applying the techniques and procedures of social network analysis (SNA) and phasal analysis (PA).

2.2.1. Social Network Analysis

Social network analysis (SNA), a quantitative method, was used to understand interactivity and the strength of relations between members of each community by mapping or graphing communicative interactions (Moreno, 1941). Communicative interactions were mapped using the program NodeXL (Smith, Milic-Frayling, Shneiderman, Mendes Rodrigues, & Dunne, 2010) to generate a visual representation showing the strength of relationships between members (i.e., degree of social distance), the pattern and direction of the interactions (i.e., unidirectional or asymmetric, mutual or reciprocal) and to provide information to explain the implications of those relationships within a social environment over time (Wasserman & Faust, 1994). This evidence informed the next stage, wherein phasal analysis was applied to investigate language use.
2.2.2. Phasal analysis

Phasal analysis, a qualitative method, was used to focus on the viable messages in the text of the communications (Gregory, 1982, 2002; Malcolm, 2010). This communication linguistics approach to discourse analysis was used to gather evidence from the discussion board postings to identify how language was interpreted (i.e., ideational meaning), acted on (i.e., interpersonal meaning), and realized in textual response (i.e., textual meaning) to generate a sociocultural context (Halliday, 1978). Language reveals the perspectives and meanings of communications for individuals within contexts of situation and informs the social structuring of the communities over time. The collection of data from each of the three databases and evidence from social network analysis and phasal analysis informed the communicative presence model.

3. Discussion

The patterning of communicative interactions together with the sociolinguistic evidence and perspectives of the participants contributed evidence to explain how individuals nuance language to inform a communicative presence via its constituent elements: digital capital, digital identity, sociocultural sensitivity, digital literacy, and communicative e-strategies (see Figure 1, below).

![Figure 1: Communicative Presence Model.](image)

Communicative presence is proposed as the overall realization of the online persona through engagement with others. It is an image informed by an individual’s social identity via human capital; epistemic views; and social, cultural, and linguistic capital realized in language. While individual agency (i.e., social and digital identity) is brought forward to influence, interpret and react to the online community, the community itself also acts to interpret, value and position the individual contributions of each member. In turn, how each individual interprets and reacts to the community manifests in language (if a textual response is provided) to inform communicative presence. Communicative congruence builds within consecutive phases of discussion and contributes to the gnostology of the community by informing the social norms for language use in context(s) of situation to make language use predictable among members. An individual’s voice is established through personal congruence and demonstrating control over interpersonal and textual features of language use holds the key to social cohesion and status. As the community interprets an individual’s language use within the community, symbolic capital in the form of social status (i.e., prestige, power) is conferred on the individual. When an individual’s language use demonstrates, for example, a breach of the etiquette of reach (i.e., the scope of topics and/or accepted language choices permissible within the community), the individual risks increasing social distance from the community. It is through the presentation of linguistic capital via language that judgements are made about features of an individual’s social identity to inform a communicative presence within the community. The communicative presence model is proposed as an interpretive and reflexive process model.
4. Conclusion

As members within an online learning community interact with one another for the purpose of generating, interpreting, and negotiating meaning, individuals become the sum of the communications they contribute to the community. When an online learning community relies primarily on asynchronous communication tools such as a discussion board, text-based discourse becomes the primary means of informing a communicative presence. However, with new communication technologies come new forms of social interaction, new forms of genre, and new forms of discourse. New forms of discourse generated by technology are also “enabling new forms of discourse analysis” (Scollon & Levine, 2004, p. 3) that may be applied to understand communicative interactions that will contribute refinements to the communicative presence model.

5. Acknowledgements

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6. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Language teachers’ use of social networking technologies in India

Kalyan Chattopadhyay
Bankim Sardar College, University of Calcutta
West Bengal, India

Abstract

Teachers and teacher educators in India are increasingly using social networking technologies in a variety of ways with friends, relatives, colleagues, and students for a number of purposes starting from sharing information and pictures to developing personal learning networks for their own professional development. Though such use of technologies is very limited in formal learning and pre-service and in-service training, informal and situated use of these technologies in teaching learning practices is very much visible.

This paper discusses social networking technologies that Indian English language teachers and teacher educators use, and they ways they use them. Results from an exploratory study conducted to gain understanding of this is discussed and textual trace of their practices in terms of pedagogical stances such as ‘resistance’, ‘replacement’, ‘return’ and ‘remediation’, and ‘recontextualisation’ is analysed. Some suggestions are offered on how these technologies can be made more relevant to teachers’ specific educational context.

Keywords: Teacher learning; professional development; digital literacy practices; social networking

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1. Introduction

The number of internet users is growing exponentially in urban India. According to a report by the Internet and Mobile Association of India (IAMAI) and Indian Market Research Bureau (IMRB), there were 80 million active internet users in urban India in December 2012 and 72% (58 million individuals) of them have used some form of social networking. This figure is expected to reach 89 million by June 2013, and 74% of them are estimated to use social networking. Therefore, in terms of use of social media urban India is registering a sharp rise from 56% (Mahajan, 2009) to 74% by June 2013. It is believed that this sudden spur in the use of social networking is impacting on the social and professional practices of the Indian language teachers. But there is hardly any research to gain foundational understanding how these teachers use social networking in their social and professional lives.

In this paper, findings of an exploratory study conducted to understand the ways the Indian English language teachers currently use social networking in their social and professional contexts are presented; textual trace of their practices in terms of various pedagogical stances were analysed and possible uses of these technologies in teaching are discussed.
2. Method

A web-based survey programme was used to elicit data on a superficial level from the Indian English language teachers on the frequency, and purpose of use of social networking; then to understand their practices in depth, two teachers were interviewed using a semi-structured questionnaire (Brown & Rodgers, 2002; Kvale & Brinkmann, 2009), and some of the traces of their practices which formed the basis of the two case studies were observed using unstructured observation technique (Dornyei, 2007). Thus quantitative and qualitative methods were applied to maximise both the breadth and the depth of the insights generated (Punch, 2005), to obtain “richer interview data that complement the broader questionnaire data” (Wagner, 2010, pp. 26-27).

Data from the individual teachers’ survey responses, interviews, and observations of their use of social networking were matched for convergence and divergence between what is said and what is written following a linguistic ethnographic approach (Maybin & Tusting, 2011; Dornyei, 2007). Further, data from the interviews and observations were used to illustrate and confirm the interpretations of the questionnaire data.

3. Discussion

3.1 Purpose and frequency of social networking

There has recently been a spurt in use of social networking amongst Indian English teachers. The survey data, however, puts their average daily use of social networking for teaching and professional development to as low as only 4.3%, which is much lower than the average their daily use for socialisation, which is 12.3%. Results show that these teachers use social networking primarily for accessing, and presenting information, interacting with students, finding professional development opportunities and for both collaborative and independent learning; they use almost similar tools and sites for teaching and professional development purposes.

A significantly higher percentage of teachers have neither received pre-service training (71%) nor in-service training (81%) in the use of social networking for any purposes. They are motivated to use social networking for their professional development because they believe such use has yielded tangible, real valuable benefits such as visibility of their work, regular updating of their knowledge, obtaining help from own professional communities.

The data shows that integration of social networking in teaching is not a regular feature of the Indian classrooms; teachers mostly use it for improving their confidence level, power of expression, and facilitating interaction between peers and the teacher, and that too either in informal contexts or for collecting information for research purposes. Though such use of technologies is very limited in formal learning and both in pre-service and in-service training, informal and situated use of these technologies in teaching learning practices is very much visible.

3.2 Pedagogical stances

Web-based networking tools like Google Groups were primarily designed to connect friends and family members, maintain connection, and share things like pictures, videos etc. But teachers in this study use Google groups as a platform for offering their students an opportunity to be familiar with each other’s work, share their writing, blog entries, presentations and other course related information. They also use them to share files and give feedback to students. These teachers pedagogically frame and recontextualise these tools as learning environments. Besides, students’ engagement with these web tools allows creation of new meaning and form through less familiar new semiotic forms, and presents new practices with these tools. Such re-mediation (Bolter & Grusin, 1999; Lamy & Hampel, 2007; Leander 2009) of these tools serves teachers’ pedagogic purposes by creating resources for web-based teaching and offering a new mode of thinking and learning.

Traces of textual practices of their students also show that they have commented, discussed, and shared links and information more than necessary for them to do for the course. Students were encouraged to cross comment on each others’ blogs, upload their presentations, and share of their links in their blogs. This practice brings in a sense of community in their classrooms (Kuhmi-stein, 2000), heightens their awareness of the communicative purposes (Ware, 2004) of their work. It also gives them the opportunity to practice their literacy skills in a non-threatening environment (Colomb & Simutis, 1996), and become more autonomous.

4. Conclusions
The present study explores the purpose and level of use of social networking technologies among Indian educators to prepare a framework for teacher training both in pre-service and in-service contexts.

The study identifies some of the key practices of these teachers. But the practices identified in this study are not collective, rather drawn from the data set of two teachers.

The study also reveals teachers' practice of return, recontextualisation, and remediation of these tools and claims that these tools are improving learners' writing skills, and contributing to their growth of cognitive skills as well. However, the veracity of this claim could not be established. It is identified as one of the probable research questions for future study.

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6. References


Global perspectives on Computer-Assisted Language Learning

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An online lexical tutor for promoting formulaic language acquisition

Mei-Hua Chen  Chung-Chi Huang  Shih-Ting Hunag
Institute of Information Systems and Applications, NTHU  Institute of Information Science, Academia Sinica  Department of Computer Science, NTHU
Hsinchu, Taiwan  Taipei, Taiwan  Hsinchu, Taiwan

Jason S. Chang  Hsien-Chin Liou
Department of Computer Science, NTHU  Department of Foreign Languages and Literature,
Hsinchu, Taiwan  Feng Chia University

Abstract

The issue of formulaic language in L2 acquisition has attracted the interest of researchers recently, as language learners are often reported to have problems with multi-word units. Several lists of formulaic sequences have been proposed, mainly for developing teaching and testing materials. However, the limited numbers and insufficient usage information seem unable to contribute to formulaic language use and learning. To address these issues, we developed GRASP, a formulaic sequence reference system to promote learners’ productive language use. Utilizing natural language processing techniques, GRASP summarizes and displays the formulaic structures and sequences in a hierarchical way. The formulaic structures can serve as a quick access index while formulaic sequences and corresponding example sentences illustrate the real world language use. Automatic summarization from language data in GRASP lends support to data-driven learning. Multi-word querying allows users to directly request the usages of the desired phrases or collocations without the need for time-consuming single-word query searches. Evaluation of GRASP was conducted with 150 Chinese-speaking EFL college freshmen using a pre- and post-test measurement. The results indicate that students gained benefit from GRASP on formulaic expression use in a sentence completion task. Especially for the less proficient students, who need extra help becoming engaged learners, GRASP serves a substantial role in supporting formulaic sequence learning.

Keywords: formulaic expression/sequence; natural language processing; multi-word querying; data-driven learning

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1. Introduction

In the past decades there has been much research into formulaic language (e.g., Wray, 2000; Simpson-Vlach & Ellis, 2010; Martinez & Schmitt, 2012). High prevalence (Nattinger & DeCarrico, 1992; Schmitt and Carter, 2004) and efficient mental processing (Martinez & Schmitt, 2012; Conklin & Schmitt, 2008; Siyano-Chanturia et al. 2011; Wray & Fitzpatrick, 2008; Wood, 2009) have led researchers to introducing formulaic language into L2 teaching and learning (Nattinger & DeCarrico, 1992; Lewis, 1993). Research and practice in language education demonstrate that learning formulaic sequences helps the development of communicative competence (Wray, 2000) and the achievement of native-like fluency (Pawley & Syder, 1983; Boer et al., 2006; Wood, 2008).

However, language learners have shown a lack of awareness and knowledge of formulaic language (e.g., Howarth, 1996; Wray, 2000). To help learners develop formulaic language competence, several lists of formulaic expressions have been compiled, such as the Academic Formula List (Simpson-Vlach & Ellis, 2010) and the Phrasal Expressions List (Martinez and Schmitt, 2012). However, a limited number of formulaic sequences with little usage information are insufficient to help learners develop their productive competence. To address this issue, we developed GRASP (Huang et al, 2011), an automatic formulaic sequence reference aid to assist learners in expanding their knowledge and use of formulaic sequences. GRASP hierarchically displayed a reasonable-sized set of syntactic patterns (formulaic structures) and lexical phrases (formulaic sequences) along with corresponding example sentences, which lends support to the idea of data-driven learning.

2. Method

The development of GRASP is based on several essential NLP techniques including lemmatization, POS tagging, phrase extraction and sentence retrieval. We first lemmatized a total of approximately 5.6 million sentences in the British National Corpus (BNC). Next, we generated the most probable POS tag sequence for each sentence. All pre-processed sentences were used for the extraction of formulaic structures and sequences. At run time, GRASP automatically identifies all the sentences containing the query phrase and groups the contextual words into syntactic patterns based on their assigned POS tags. Meanwhile, the corresponding lexical items are summarized to form formulaic sequences.

GRASP categorizes both the syntactic patterns and lexical items surrounding (i.e., preceding, in-between, and following) the query phrase. Take the phrase useful purpose as an example. GRASP generates the most common preceding usage patterns “VB DT useful purpose” (“VB” for base verbs and “DT” determiners). The organized pattern information serves as a quick navigation index. For each pattern, GRASP suggests several representative instances. The most frequent preceding verb serve and determiners no and a form formulaic expressions serve no useful purpose and serve a useful purpose. To expose learners to authentic language use, corresponding example sentences are provided, and these enable learners to raise awareness of the various uses of individual formulaic sequences.

3. Discussion

To evaluate the effectiveness of GRASP, we designed pre-test and post-test assessment to compare 150 participants’ performance on a sentence composition task. Students were randomly divided into two groups to consult GRASP (Group G) or existing tools, either the Longman English Dictionary Online or Google Translate (Group E).

Table 1: Comparison of students' average scores in sentence completion task.

<table>
<thead>
<tr>
<th></th>
<th>pre-test</th>
<th>post-test</th>
<th>improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group G</td>
<td>40.9</td>
<td>55.5</td>
<td>35.8%</td>
</tr>
<tr>
<td>Group E</td>
<td>39.3</td>
<td>48.4</td>
<td>23.3%</td>
</tr>
</tbody>
</table>

Note: Group G (N = 74) indicates the students learned formulaic sequence use by consulting GRASP whereas Group E (N = 76) indicates the students consulted the Longman English Dictionary Online or Google Translate. Full marks = 100.0.
As shown in Table 1, all students clearly achieved gains with the help of reference tools. However, Group G achieved a better performance than Group E. The results of ANOVA showed significant differences between Group G’s and Group E’s improvement ($F = 17.207, p \text{ value} < .001$). That is, the students’ formulaic sequence use improved markedly and reached a level of statistical significance with the help of GRASP.

Next, we explored the improvement of students with different proficiency levels. Students’ test scores in the pre-test were used as an indicator of their proficiency levels. Thus all 150 students were divided into four groups based on the tools they consulted and their proficiency levels: GH, GL, EH, and EL. Both GH and GL performed far better than EH and EL. The result corresponded to the above analysis. But GH gained less benefit from GRASP than GL. Further investigation revealed that GL made the most significant achievement ($p \text{ value} = .004, .000, \text{ and } .001$ respectively), while there existed no significant performance differences among GH, EH, and EL.

Students were unable to manage formulaic language use well, which might be due to the restricted functionalities and information display of the existing tools. For example, it was time-consuming to use a single-word query in the Longman English Dictionary Online. This led students to several more trials to target the query phrases. Additionally, the surrounding usage information of the located phrases was largely absent, and even when available, learners needed to deduce the usage patterns by themselves. Google Translate fails to provide the usage information of the desired query phrase.

In contrast, GRASP bridges the gaps existing in current reference tools. Multi-word querying allows users to directly target at querying the usages of the desired phrases or collocations. The categorized formulaic structures and sequences along with example sentences effectively facilitated language learning (Bruner et al., 1956: 244).

4. Conclusions

In this research, we developed GRASP for formulaic language learning. Utilizing natural language processing techniques, GRASP automatically generated formulaic structures and sequences characterizing the usage of the given query phrase.

To evaluate the effectiveness of GRASP, 150 Chinese-speaking EFL college freshmen performed a sentence completion task in a pre- and post-test arrangement. Students consulting GRASP showed significant progress compared with those consulting existing tools. Further analysis revealed that less proficient students showed marked improvement statistically. In short, both the enhanced functionalities and the hierarchical organization of lexical information provided by GRASP were demonstrated conducive to the acquisition of formulaic language use.

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6. References


Global perspectives on Computer-Assisted Language Learning

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Developing learner autonomy through cooperative learning on the online platform of “College English Language Skills Training Systems”

Li Cheng
Beijing University of Posts and Telecommunications
Beijing, PRC

Zhihong Lu
Beijing University of Posts and Telecommunications
Beijing, PRC

Fuan Wen
Beijing University of Posts and Telecommunications
Beijing, PRC

Abstract

Previous studies have suggested that a blended approach of integrating face-to-face instruction and computer-mediated communication (CMC) offers collaborative opportunities for learners of English to reciprocally scaffold knowledge, improve English proficiency and develop communication skills. One of the major issues in CMC is how to provide effective teacher directives that can optimize learner autonomy and at the same time facilitate effective cooperative learning. This paper reports a three-month study based on the blended teaching approach using the platform of “College English Language Skills Training Systems” (CELSTS). The purpose of the study was to investigate the effects of the blended approach on students’ learning autonomy and their writing proficiency. Participants were 67 year-two engineering students. All the participants received same face-to-face instruction and were given the same collaborative tasks including writing meeting minutes and reports, designing user manuals, conducting job interviews, making academic presentations. Apart from two hours’ face-to-face instruction every week, the students were asked to use CELSTS for writing practices. Data were collected from the scores and feedback on the platform, two writing tests, coursework, a questionnaire survey on learner autonomy, two group interviews and online exchanges. Quantitative and qualitative analysis of the data showed significant increase of the students’ autonomy in writing. Moreover, CELSTS was a helpful evaluation and assistant tool in English language learning. Pedagogical implications are then discussed.

Keywords: learner autonomy; cooperative learning; computer-mediated communication (CMC); online platform; English learning

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1. Introduction

The past two decades have witnessed the growing importance of computer-assisted language learning in English language classrooms. One of the issues under discussion is automated scoring (AS) programmes (See Page, 2003). Web-based AS programmes of essay writing usually are equipped with not only assessments of editing features (e.g., checkers of grammar, spelling, and register/style) but also scoring engines at the lexical, syntactic and discourse levels. There are three major advantages of using AS programmes in English language learning.
The first advantage is that writing instructors in a class with AS programmes tend to have less workload of scoring and giving feedback than in a traditional class. The second advantage is that AS programmes provide immediate feedback including scores, comments and suggestions, which can be used for both formative and summative assessments. The last major advantage of using AS programmes is the links to online resources they usually provide, e.g., word banks and sample essays and templates. These online links make AS programmes not only evaluation tools but also assistant tools. Despite the above-mentioned advantages, one criticism AS programmes have received is the lack of meaningful context where language learning takes place.

The theoretical underpinnings for the current study were computer-mediated communication (CMC), learner autonomy and collaborative learning. Previous studies have demonstrated that a blended approach of integrating face-to-face instruction and CMC offers collaborative opportunities for learners to reciprocally scaffold knowledge, improve English proficiency and develop communication skills (e.g., Beatty & Nunan, 2004; Potts, 2005).

2. Method

2.1. The study

This paper reports a study from a larger investigation into an evolving online community in relation to students’ participation and learning autonomy. Specifically, the study intended to explore the effects of a blended teaching approach on students’ learning autonomy and their writing proficiency. The study was conducted in two English classes at a major university in Beijing during a three-month period from February to May, 2013. This English course was guided by task-based instruction and comprised a variety of learning tasks including designing user’s manuals, conducting job interviews, making academic presentations and writing technical reports and conference papers. Thus, the students were expected to improve their language skills and communication skills through doing the tasks/projects.

The researcher of the study was also the instructor of the two English classes. The researcher employed a blended teaching approach, i.e., in-class face-to-face instruction assisted by the use of “College English Language Skills Training Systems” (CELSTS) and social networks (SNS) including QQ and Fetion. CELSTS was an English training platform using automated scoring programmes. This platform has been used for College English teaching and learning at this university since 2008 and has proven successful in grammar and vocabulary teaching, audio-visual learning, as well as testing. Starting from February this year, the platform was implemented in the English course for one semester on a trial basis. A total of 67 year-two engineering students volunteered to participate in the study.

The use of the blended teaching approach in this study was supported by the view that writing requires not only linguistic and formal accuracy and appropriateness but also meaningful construction between the writer and the reader. Therefore, writing needs to take into consideration social and cognitive factors that affect how meanings are negotiated (Flower, 1994; Grabe & Kaplan, 1996).

2.2. Data collection techniques

A triangulation of data collection techniques were used in the study. The data included (1) two in-class writing tests (one pre-test in the end of February and the other post-test in the end of May), (2) the participants’ writing samples and revised versions along with the scores and feedback generated by CELSTS and the instructor’s and peer feedback, (3) two focus group interviews, (4) the participants’ responses to the end-of-the-term questionnaire on learner autonomy, and (5) online exchanges on SNS.

3. Discussion

Data from the interviews and the questionnaire showed that the participants’ awareness of learning autonomy had increased significantly at the end of the term. Moreover, the students held different perceptions of the effectiveness of CELSTS. Seventy-three percent of the participants (49) found the platform of great help because it gave them immediate feedback in terms of scores, errors in spelling, grammar, mechanics and style, and suggestions on how such errors could be corrected or improved. Moreover, 85% of the students (57) found it more helpful with both CELSTS and human feedback. Furthermore, 39 participants (58%) mentioned that it was helpful to use the online learning resources including writing templates, an online dictionary and writing
samples from students of previous years. Students’ preferences varied in the extent and the ways of integrating the learning platform into different writing tasks.

Data also revealed that the process of peer review helped the students to be more aware of the writing errors they often made. Examples of the writing mistakes and suggested corrected versions were gathered and posted (without showing the name of the student) in the online writing assistance folder of “Common Writing Mistakes in Technical and Scientific Writing”. A total of 26 common mistakes were found with “Chinglish”, “Format”, “Word Choice”, “Mixed or Incomplete Constructions”, “Article Usage” and “Mechanics” being the top six mistakes with highest frequency.

4. Conclusions

The discussion of the effectiveness of CELSTS centred around three aspects: use of automated evaluation scores, need for human feedback, and purposes for writing. Despite its limitations (e.g., vague and formulaic feedback), CELSTS remained a very helpful evaluation and assistance tool. Results of the study have shown that human facilitation plays an important role in computer-assisted learning environments. It is suggested, therefore, AS programme developers and writing teachers take into account how interactive functions can be integrated into AS programmes and how context and meaning can be incorporated into teacher directives in a blended teaching approach.

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Global perspectives on Computer-Assisted Language Learning

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School-to-school correspondence—Then and now

Anne Choffat-Dürre
Atilf – CNRS / University of Lorraine
Nancy, France

Abstract

Our paper examines the aims and tools related to more than a century of collaborative classroom exchange practices that enable schools to make links abroad. It presents a comparative study between the International School Correspondence (ISC), including International Federation of Organizations for School Correspondence and Exchanges (IFOSCE) reports from the 1930’s to the 1970’s, and what we now observe in European transnational actions supporting online exchange partnerships. It focuses in particular on an empirical study of four French/British school partnerships involving 8-to-11-year-old French and British pupils (195) interacting during the 2011-2012 school year. The study predominantly questions the activities undertaken by the four partnerships as a result of the pedagogical and instructional choices made by their teachers as well as the type of actions that were generated by the social connections between these classes. Among the findings of a survey conducted with 121 primary school teachers in France, we observe that many of them do not see the potential in using computer-mediated communication tools for developing learners’ oral skills when interacting with native speakers. They seem to base their practices on former “models” initiated by the ICS and favour asynchronous interaction and even epistolary exchanges. Therefore this paper reports on a cross-referenced analysis induced by these findings, considering inter-school correspondence as a perennial help for language learning and teaching.

Keywords: school-to-school correspondence; interpersonal relationships, primary school; international actions; computer-mediated communication tools

1. Introduction

The International Federation of Organizations for School Correspondence and Exchanges (IFOSCE) and UNESCO reports prior to 1950 attest that rich social interaction with native speakers (NS) may be promoted by International School Correspondence (ISC). A 1953 UNESCO report states that ISC promotes willingness for international understanding and lasting friendship, based on effective knowledge of the country and a co-learning process of the language. It was said that learners had access to a more “authentic” language, more varied models and that they benefited from an active participation in feedback production. However, exchange activities with under-12 learners were less fruitful because of their “poor” language proficiency and needs for assistance (Barrier, 1955). Today, thanks to computer-mediated communication (CMC) tools, other pedagogical means with quite similar aims are considered in an integrative mode for school purposes. European programs like eTwinning or tele-Tandem® are some examples of this practice. Learners produce and exchange visual or
audio digital documents with NS. They have the choice to communicate either in synchronous and/or asynchronous modes. This means they are not constrained to writing or to using a specific genre because of the tool used.

Initially viewed as a personal matter between two penfriends, ISC legitimately entered the school sphere a long time ago (Brebner, 1898, Alziary & Freinet, 1947, Barrier, 1955). While various factors need to be taken into account (O’Dowd, 2003, O’Dowd & Ware, 2009), many reports attest to the relevance of ISC in language teaching regardless of whether the means of communication be traditional exchanges of letters or CMC (Guichon, 2012). Consequently, we may suppose that the ambitions of the teachers who turn to international cooperation evolve with the tools available to them. This raises the question of whether interschool correspondence is relevant in elementary school if learners continue to apply its former principles, namely the use of a written code, language switching, feedback production, etc.

2. Method

Our study initially questioned shared action for the benefit of English/French learning in elementary school in the context of distance exchanges between learners of the same age (8-to-11-year-olds). We aimed to identify variables and influences in classrooms where students were linked to NS, in particular the communicative contexts in which action takes place. Prior to the data collection in class, a preliminary survey was conducted to put instructional and pedagogical actions into context and to help further qualitative data analysis. Via an online survey, we questioned French primary school teachers (121), engaged or not in distance exchange pedagogy, in order to obtain an overview of their dominant educational perceptions. Our study is built upon this survey and presents data collected in eight classrooms involved in partnerships in France and Great Britain as well as a comparative-analysis and summary of work relating to interschool correspondence. The salient specifics emerging from this research require a comprehensive identification of ideological, epistemological and didactic grounds linked to the practice and the tools correlated to it.

3. Discussion

ISC comes in contradiction with the Cartesian paradigm, which stipulates that language is nothing but “objectivized theoretical knowledge” (Bourguignon, 2001). It allows individuals to communicate their world and to reveal themselves to others, which gives meaning to their communication. That is why it is presented in a temporal continuum: a willingness to build social links (pacification/reunification of peoples). However, our survey shows that today in France, teachers do not adhere to such ideological principles. They principally resort to active pedagogies to develop language skills. In this field, it may be commonplace to say that the target audiences and the goals, as well as the technological tools that contribute to the mediation of communication are diverse (Degache & Mangenot, 2007). However, the data from our study reveal that teachers continue to focus on written skills more than oral ones. They do not often turn to CMC tools in their teaching and they first favour e-mail correspondence (57%) and communication by post (32%). Therefore, even if the tools are more varied today, we identify constants between yesterday’s and today’s practices to be examined in early-language learning contexts. The accent is brought to bear more on the dynamics of social interaction to enhance both language awareness and learning awareness. In particular, corrective feedback is provided, responding to schools’ lack of “consideration of the metalinguistic function in the appropriation of languages, of its role both from a reflexive point of view but also from a communicative point of view” (Castellotti, 2001). Though it is said that young learners have little ability to decenter and relativize their own language and culture (Byram & al., 2001), exolinguistic exchanges help to develop cultural awareness and intercultural skills. Their activities and the topics covered no longer depend solely on teachers’ choices. Likewise, interactive activities are no longer uniquely with peers who often share the same native language and cultural background. To conclude, we observe that within an institutional context, in exchange projects focusing either on letters or on CMC, learners gain autonomy and develop their creative skills while entering a process which contributes to developing their overall metacognitive skills (Ellis & al., 2006).

4. Conclusions

So far, relatively little research has focused on correspondence based on exolinguistic interaction between learners in primary education, as most research has been conducted with older students (O’Dowd, 2007; Guichon & Hauck, 2011). Our research shows how young learners engage themselves in active learning activities taking advantage of links abroad, under the teacher’s guidance. Whatever the tools used, having to interact with NS at a young age contributes to making a shift in attitudes, leading learners to perform in a socio-
constructivist context that introduces metacognitive activities in language learning. If in the past CSI was presumed premature at primary school, it may be considered a regular addition to learning practices today. Since our study is geographically limited, it would be of interest to examine other viewpoints elsewhere around the world.

5. Acknowledgements

To Dominique Macaire and Latisha Mary, University of Lorraine, for their suggestions and reviews.

6. References


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Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Intrinsic motivation in a blended learning environment

Tatiana Codreanu
ICAR Research Laboratory
Lyon, France

Sandrine Chein
Institut français du Royaume-Uni
London, UK

Gaelle Robin
Institut français du Royaume-Uni
London, UK

Abstract

The aim of this research is to investigate the impact of tutoring method in achievement motivation in a blended learning environment of French Foreign Language. The research goal is twofold: (a) to understand the changes in expectancy beliefs and task values in the domain of Teaching French as a Foreign Language, and (b) to study the impact of the tutor and the peers on intrinsic motivation for learning French and upon the perceived value of the task. Our research consists of two studies conducted with learners of French.

Keywords: Applied Linguistics; Online Learning; Intrinsic motivation; Education; Learning Psychology; Experimental study; Expectation-valence model; Self Determination Theory; User Experience

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1. Introduction

Studies on motivation have focused mainly on two kinds of approaches: socio- psychological (Gardner & Lambert, 1972) and cognitive (Atkinson, 1957; Eccles et al. 1983; Deci & Ryan, 1985, 2000; Pintrich & Schunk, 1996; Bandura, 1997; Wigfiled & Eccles, 2000). The first approach takes into account the instrumental motivation (Gardner & Lambert, 1972). The second approach considers motivation as a dynamic process that is dependent on multiple factors. Several existing studies on foreign language learning have explored motivation (Dörnyei, 2003; Ohki, Hori, Nishiyama, & Tajino, 2009). The present research consists of two studies on intrinsic motivation conducted with students using Moodle in addition to their French classes in situ at the French Institute of London. It attempts to answer the following question: What pedagogical communication practices are likely to increase learners’ intrinsic motivation in a blended learning environment? Intrinsic motivation (see Wigfield & Eccles, 2000) is directly linked to one’s enjoyment of accomplishing a task.
2. Method

2.1. Methodological framework

The theoretical framework is based on the Self-Determination Theory (Deci & Ryan, 1985, 2000) and Expectancy-Value Theory of Achievement Motivation (Eccles et al, 1983, 2000). Both models have similar conceptual constructs (Eccles, 2005) in terms of intrinsic motivation. We conducted two complementary studies.

The main objective of the first study is to estimate, in an experimental setting, the expectations and values related to learning French at the French Institute of London. In order to highlight the motivational changes of learners we conducted a longitudinal study based on the cognitive variables of the Self-Determination Theory.

The experimental research is based on a questionnaire that analyzes the four value constructs of Eccles' model of motivation: expectancies of success, attainment value, intrinsic value, utility value and the perceived emotional costs associated with learning French (see Wigfield & Eccles, 2000). The longitudinal study, conducted in an empirical setting, focused on the impact of the pedagogical methods and peer motivation for learning French.

A researcher cannot neglect the pedagogical context in which exchanges take place (Mangenot, 2007). Following Mangenot's methodology, we utilised a cross-section of theories. This approach aims to determine factors that can directly influence the attitudes and practices of learning. Hence, drawing on McCarthy & Wright (2004), we considered students’ experiences while using technology.

2.2. Participants

The student sample consisted of 34 students for the experimental study and 15 students for the longitudinal study (3 classes).

2.3. Procedure

Participation was voluntary. Teachers asked students to fill in the first questionnaire before starting to use Moodle for online activities. The second questionnaire was given two weeks after using Moodle and the third questionnaire was given 10 weeks later. Students had between 5 and 10 minutes to complete the questionnaires in class.

The first questionnaire contained 16 closed Likert-type questions adapted from Wigfield & Eccles (2000), measuring the expectancies for success (i.e. I believe I can master French), the attainment value (i.e. French is worth being mastered), the intrinsic value (i.e. I enjoy learning French), the utility value (i.e. What I am learning will be useful for traveling) and the cost for learning French (i.e. Learning French is difficult). Results have been compared to a previous experimental study conducted in similar conditions at Seattle Pacific University (Codreanu, 2009).

The longitudinal study consisted of 15 Likert-type questions taking into account existing methodologies (Noels et al., 2000) measuring intrinsic regulation (i.e. I enjoy online activities), identified regulation (i.e. I find value in interacting with my peers), introjected regulation (i.e. It is preferable to refer to online activities like my peers), external regulation (i.e. I need to refer to online activities in order to give a good impression of myself) and amotivation (i.e. Referring to online activities as my peers is a waste of time). Since each value has multiple questions, we used the median for the statistical analysis. We used the U-Test to assess whether there are significant differences within results.

In addition, to further study students’ experiences as Moodle users, students answered four open-ended questions (What helped/hindered your learning? What aspect of the course did you find valuable? How could the course be improved?).
3. Results

We found the resulting values of attainment, intrinsic motivation and utility to be higher than that of expectancies for success and cost, while the perceived cost of learning French was higher that the expectancies for success. The standard deviations indicate that students are not in agreement regarding attainment and utility values. However, there is consensus on the perceived cost variable, which is significantly higher at the French Institute compared to Seattle Pacific University.

The results indicate an increase in intrinsic motivation and introjected regulation, and a significant decrease in amotivation between March and June 2013. Intrinsic regulation and identified regulation values rise significantly in the space of three months. The difference demonstrates an increase in the degree of self-determination and autonomous motivation among students.

The open-ended questions indicate that the students value online activities, writing posts on the Moodle blog and learning from other students’ texts. They also place value on feedback and prompt responses from the teacher, clear and focused lessons and the use of varied material and pedagogical approaches. However, five students found that learning was hindered due to usability issues such as difficulties in locating desired pages, a cluttered interface, and so on.

4. Conclusions

The current research found the pedagogical methods and peer interactions to be significant factors that directly influence intrinsic motivation for learning. However, we only analyzed cognitive values, and results would gain in accuracy through a more detailed analysis that takes into account the satisfaction of the three basic psychological needs and performance. In methodological terms, we aim to conduct a longitudinal study over 12 months, collecting data in two stages using Structural Equation Modeling, in order to verify the theoretical assumptions. There is a perceived cost attached to design and usability that requires further exploration in order to sustain motivation among students using Moodle.

5. Acknowledgements

The authors wish to express their gratitude to Dr. Katerina Zourou for helpful comments on earlier drafts of this paper.

6. References


Press.


Global perspectives on Computer-Assisted Language Learning

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Seeking out fun failure: How positive failure feedback could enhance the instructional effectiveness of CALL mini-games

Frederik Cornillie
ITEC – iMinds – KU Leuven
Kortrijk, Belgium

Piet Desmet
ITEC – iMinds – KU Leuven
Kortrijk, Belgium

Abstract

This study addressed the motivational affordances of a game design feature, viz. positive failure feedback (PFF), for tutorial CALL practice. In commercial off-the-shelf games, PFF has been praised for its positive effects on player motivation. To test the hypothesis that PFF may increase learner motivation in tutorial CALL, a within-subjects experimental design was used; learners (N=32) practised English dative alternation using three versions of a speeded grammaticality judgment task, which differed with respect to the presence of PFF and fantasy. Descriptive statistics of the questionnaire data indicate that fantasy and PFF may have increased immersion; inferential statistics show that there were strong significant correlations between immersion, intrinsic motivation, and willingness for future practice. Somewhat in contrast with the questionnaire data, post-experimental interviews pointed out that PFF also led to frustration, and may distract from the learning task. These findings suggest (a) that fantasy and PFF may increase motivation and time on task, and could in this way strengthen the instructional effectiveness of controlled practice, but also (b) that cognitive load may play a mediating role. Future research could zero in on the relation between PFF, motivation, and automatization, the potential mediating role of cognitive load, and the effects of practice on more communicative L2 use.

Keywords: tutorial CALL; corrective feedback; motivation; game-based learning; instructional design

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1. Introduction

Controlled practice, defined here as learning aimed at improving performance of specific routines as a part of acquiring more complex skills, is considered a necessary step towards the achievement of skilful behaviour in many areas of human development (Anderson et al., 2004), including the learning of a second language (L2) (DeKeyser, 2008). While tutorial CALL (Hubbard & Bradin Siskin, 2004) may offer exactly such practice, drawing this card—often referred to as drilling—entails at least three challenges. First, explicit focus-on-forms practice needs to engage learners foremost in meaningful L2 processing (Wong & VanPatten, 2003). Secondly, Dörnyei (2009) writes that “the key to the effectiveness [of controlled practice] is to design interesting drills that are not demotivating” (p. 289). Ideally, L2 practice environments catalyse self-sustained and potentially intrinsically motivated types of behaviour, so that learners are willing to practise without the teacher present. A third and related challenge is that the corrective feedback (CF) inherent in L2 practice with CALL could harm motivation (Robinson, 1991; Schulze, 2003).
This study addresses the latter two challenges, and introduces to CALL research a notion of game design, viz. positive failure feedback (PFF), in an attempt to make controlled practice motivating. In commercial off-the-shelf games, PFF signals that the player has failed, but—since PFF refers to the representational context of the game and includes elements of fantasy and/or story—is at the same time “a vivid demonstration of the players’ agency in the game” (McGonigal, 2011, p. 66; emphasis added). Such feedback has been found to elicit positive emotional responses to in-game failure (Ravaja, Saari, Salminen, Laarni, & Kallinen, 2006). The current study hypothesized that in tutorial CALL practice, fantasy and PFF (or vivid CF) may be associated with an increased sense of competence and immersion. It addresses the following research questions:

1. How do fantasy and PFF (or vivid CF) affect learners’ perceived competence and immersion?
2. How are perceived competence and immersion related to learners’ intrinsic motivation, and to their willingness for future practice?

2. Method

A within-subjects experimental design was used: participants practised English dative alternation in 3 different versions of a grammaticality judgment task; the order of these 3 conditions was randomized per participant. The learners (N=32) were intermediate-level Dutch-speaking students in the 3rd and 4th year of secondary education in Belgium. English Dative alternation is known as a complex and rather difficult learning problem for L1 and L2 learners alike (Pinker, 1989), and for L2 learners, specifically, feedback is considered necessary in order to master it (Carroll & Swain, 1993).

In all three conditions, learners had to judge the grammaticality of a random selection drawn from 36 sentences. In order to stimulate automatization of the target structure, the task was speeded: learners were asked to judge as many sentences as possible within 60 seconds, and there was an additional 10-second time limit per sentence. For correct responses, a green checkmark was shown, and positive feedback was given in the form of points (with sound support).

Two of the three conditions comprised a fantasy, viz. a detective (the learner) that questions witnesses using a videophone. One fantasy condition (B, Figure 2) included plain CF, the other (C, Figure 3) contained vivid CF. Condition A contained no fantasy and plain CF (Figure 1).

Plain CF was displayed as a red cross above the button corresponding to the learner’s judgment, complemented with a sound effect which may be best described as an ‘incorrect’ sound typical of quiz shows. Vivid CF comprised the same red cross (without the ‘incorrect’ sound) and any of three animations with sound support (an electric shock, water filling the screen, and an alien flying over), as well as the current witness’s facial expression changing to horrified or angry. In combination with 7 witnesses (for which celebrities were used), these animations resulted in 21 possible forms of vivid CF. User tests and best practices in game design (Swink, 2006) indicated that such variation in vivid CF was necessary.

<table>
<thead>
<tr>
<th>design feature</th>
<th>condition A</th>
<th>condition B</th>
<th>condition C</th>
</tr>
</thead>
<tbody>
<tr>
<td>fantasy</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>visual CF</td>
<td>red cross</td>
<td>red cross</td>
<td>red cross +</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>animation</td>
</tr>
<tr>
<td>auditory CF</td>
<td>‘incorrect’ sound</td>
<td>‘incorrect’ sound</td>
<td>animation sound</td>
</tr>
</tbody>
</table>

Table 1: Three conditions differing with respect to fantasy and CF
Before the experiment, learners completed a language test and were instructed on dative alternation. Then, they were asked to practise twice in each condition. After each condition, they filled out a questionnaire with 7-point Likert scale items on perceived competence (6 items; Cronbach’s $\alpha = .8$), perceived immersion (9 items; $\alpha = .88$), interest/enjoyment (7 items; $\alpha = .84$) (Ryan, Rigby, & Przybylski, 2006), and their willingness for future practice (1 item), as well as single items on cognition-oriented perceptions (e.g. perceived difficulty). The order
of items was randomized in each questionnaire. A post-test concluded the experiment. Analysis of the language tests is outside the scope of this paper.

3. Results and discussion

For research question 1, comparisons of the boxplots show that perceived competence is not likely to vary significantly between the conditions, but that the condition might affect immersion. Specifically, fantasy and PFF could have increased immersion. Further statistical analyses will be conducted to draw more firm conclusions.

![Boxplots of perceived competence and immersion for each of the conditions](image)

Figure 4: Boxplots of perceived competence and immersion for each of the conditions

For research question 2, medium-sized correlations were found between perceived competence and interest/enjoyment ($r = .43$, $p < .01$) and willingness for future practice ($r = .37$, $p < .05$); immersion was strongly correlated to interest/enjoyment ($r = .66$, $p < .01$) and willingness for future practice ($r = .61$, $p < .01$). This suggests that learners with higher perceived competence and immersion are likely to be more intrinsically motivated and to practise more.

<table>
<thead>
<tr>
<th>variable</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
</tr>
</thead>
<tbody>
<tr>
<td>perceived competence</td>
<td>—</td>
<td>.08</td>
<td>.43**</td>
<td>.37*</td>
</tr>
<tr>
<td>perceived immersion</td>
<td>—</td>
<td>—</td>
<td>.66**</td>
<td>.61**</td>
</tr>
<tr>
<td>interest/enjoyment</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>.69**</td>
</tr>
<tr>
<td>willingness for future practice</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Table 2: Pearson’s $r$ correlation coefficients for research question 2, adjusted for multiple comparisons using Holm’s method (** $p < .01$ ; * $p < .05$)

Post-experimental interviews were held with 6 learners. Perhaps surprisingly, nobody preferred the version with PFF: 5 interviewees preferred B, 1 preferred A. They found the PFF distracting and even frustrating. One learner remarked, however, that despite his preference for version B, he enjoyed the PFF, and even deliberately failed a couple of times to find out what would happen. While this is consistent with reports of gamers that actively seek out failure during play (McGonigal, 2011), designers of game-like learning environments may need to be wary of using PFF, as it may result in cognitive load that hinders learning (see also deHaan, Reed, & Kuwada, 2010).

4. Conclusions

In a skill acquisition perspective on L2 development (DeKeyser, 2008), considerable amounts of practice are necessary to consolidate the effects of instruction. The findings of this study suggest that fantasy and PFF may have positive effects on learners’ motivation, which may stimulate further practice and L2 learning. This implies that vividness needs to be considered in the design of tutorial CALL feedback. Future research could focus on the precise relation between vividness of CF and the amount of controlled practice, and its effects on
automatization and transfer to other tasks that involve more communicative L2 use, but also on the relations between PFF, cognitive load and L2 development.

5. Acknowledgements

The conceptual design of the technology used in this study, but not its development, was partly realized through interaction with the Games Online for Basic Language learning (GOBL) project (519136-LLP-2011-NL-KA2-KA2MP), funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use that may be made of the information contained therein.

We wish to thank Dr. Mieke Vandewaetere for her kind methodological advice.

6. References


Global perspectives on Computer-Assisted Language Learning

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Experiences of e-tandem language learning: collaborative learning principles

Ana Carolina de Laurentiis Brandão
Universidade do Estado de Mato Grosso - UNEMAT
Alto Araguaia, Brazil

Abstract

This paper aims to present and analyze the use of collaborative learning principles in Portuguese and English e-tandem partnerships established by participants of a research project developed at a Brazilian university. Tandem is a collaborative context in which two people proficient in different languages establish a partnership in order to exchange linguistic and/or cultural knowledge, or any other kind of knowledge. This learning context is governed by three principles: bilingualism, reciprocity and autonomy. In the project, participants could either establish partnerships with Portuguese learners from a collaborating American university who wanted to teach English or Spanish, or search for partners on language exchange sites such as livemocha.com. For the study presented in this paper, only the participants who chose to teach Portuguese and learn English were selected. Two of them were undergraduate students of the Languages course at the same university where the project was developed, and one of them was an administrative employee at the university. Tandem partnerships were conducted in MSN Messenger. The theoretical foundations for this study are drawn from ideas in tandem, CALL, and collaborative learning. The research methodology of Narrative Inquiry is used. The field texts involve interactions between Brazilian learners and their partners, and narratives written by them and by the researcher after the experience. The analysis of this material is based on Meaning Composing. It could be argued that most of the participants collaborated with difficulty, particularly with respect to the tandem principles of reciprocity and autonomy.

Keywords: Narrative Inquiry; e-tandem language learning; collaboration.

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1. Introduction

Beyond language learning, internet-based communications can offer participants possibilities of empowerment, of developing their autonomy, and of being engaged in collaborative projects (Paiva, 2001a, 2001b, 2012; Warschauer, 1997, 2000). An example of an internet-based collaborative context is tandem.

According to Telles and Vassallo (2009), tandem is a context based on agreed meetings established by speakers of different languages who are neither native speakers nor teachers, aiming to exchange linguistic knowledge. I adopt the concept of tandem from Telles and Vassallo, because unlike other authors (Calvert, 1992; Brammerts, 1996; Brammerts & Calvert, 2003), they understand tandem as a context rather than a method, and believe tandem partners need not necessarily be native speakers of the language they aim to teach.
There are different models of tandem. Participants can either meet face-to-face, exchange reading/writing resources (e-tandem), or talk to and/or see each other online (teletandem). Tandem is governed by three principles: bilingualism (Telles & Vassallo, 2006, 2009), reciprocity and autonomy (Brammerts, 1996). In this context, bilingualism means languages cannot be mixed. Reciprocity means that both partners need to benefit equally. Autonomy refers to each partner’s power to decide what, how and when to learn, and is negotiated mutually (Telles & Vassallo, 2009).

Salomão and others (2009) state that reciprocity is vital to collaboration since partners need to be committed to offer what they receive. In this sense, I argue reciprocity involves the collaboration concept of Eshet-Alkalai (2004), in which participants are open to learning and sharing with others. I believe autonomy in tandem is also important for a successful collaboration because partners need to negotiate what they would like to learn. According to Dillenbourg (1999), space for negotiation in collaborative learning experiences is crucial, determining the success or the failure of an interaction.

The main aim of this study is to present and analyze the use of collaborative learning principles in Portuguese and English e-tandem partnerships established by participants of a tandem project developed at the State University of Mato Grosso. More specific goals are to discuss how they dealt with tandem principles and how it affected their partnerships. The project was sponsored by the Mato Grosso Research Foundation (FAPEMAT).

2. Method

The methodology of Narrative Inquiry (Clandinin & Connelly 2000, 2005) is used. Three language learners from the Brazilian tandem project, who developed a Portuguese/English e-tandem, are the research participants of this study. They could either establish partnerships with Portuguese learners from an American collaborating university, or search for partners on language exchange sites.

Among the field texts are recordings of tandem interactions in MSN Messenger during the second semester of 2011, and narratives written by the participants and the researcher in 2012. The analysis is conducted from the perspective of Meaning Composing proposed by Ely, Vinz, Downing & Anzul (2001).

3. Discussion

The research participants were João, Simone and Gisele (pseudonyms). João and Gisele were students of the Undergraduate Course in Languages and Simone was an administrative employee at the university.

In general, participants found bilingualism difficult (Telles & Vassalo, 2006, 2009), and sometimes mixed languages. They also did not define a space for negotiation (Dillenbourg, 1999), in which to discuss how they wanted to learn Portuguese (autonomy). In the following example João immediately launches into a section, in English (rather than Portuguese), without having first consulted his partner:

João diz: Let's start with the Portuguese?
João diz: First lesson
João diz: Cow-vaca
(João/Dayse in MSN – 22/09/11)

João also struggles with autonomy and puts all of the responsibility of his English learning onto his partner:

João diz: Ok What is first lesson?
(João/Dayse in MSN – 22/09/11)

Due to the difficulty of negotiating, participants sometimes gave up partnerships, arguing that their partners did not want to learn Portuguese. However, some participants were able to negotiate methodological aspects:

Simone diz: sim... então vamos tentar nosso próximo encontro (Wednesday 14:30 for you) and in Brazil 17:30 for me. Ok? como deseja aprender portuguÊs: por textos, diálogo livre ou gramática?
(Simone/Peter in MSN – 09/11/11)

Reciprocity (Brammerts, 1996) was also an issue. Occasionally, partners showed no interest in sharing their knowledge (Eshet-Alkalai, 2004), by not correcting mistakes, even when they were asked to do so:
Simone diz: (...) correct me please I need to improve my English...help me..
(Simone/Peter in MSN – 02/12/11)

Participants were sometimes late or did not show up to meetings, further undermining reciprocity.

In some cases, however, partners were able to negotiate not only the interaction time but also the methodological issues, and I believe this helped to make for a lasting partnership:

*Gisele diz: and you would like to practise .. what?*
*Kevin diz: simply speaking. You can ask me things and I will answer*
*Gisele diz: Do you want I correct you if you write something wrong?*
(Gisele/Kevin in MSN – 13/10/11)

In their own accounts, participants cited as advantages of tandem the opportunity to learn both their target language and their own language. Among the disadvantages were time zone differences and the difficulty of finding a partner. I would add to that the difficulty of negotiating partnerships and the inability of some of the participants to compromise.

4. Conclusions

In this study, it could be argued that most of the participants collaborated with difficulty, particularly with respect to the tandem principles of reciprocity and autonomy. Only one participant had a long-lasting e-tandem partnership (with a member of a language exchange site rather than a student from a collaborating university). However, all the participants had opportunities to learn and teach languages.

I believe this study can contribute to a better understanding of internet-based tandem, particularly with respect to the collaborative learning principles that govern such a context.

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Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Fostering multilingualism with computer-based multilingual storybooks: The European Comenius project MuViT

Daniela Elsner
Goethe-Universität
Frankfurt am Main, Germany

Abstract

This paper introduces the theoretical framework and the main (research) objectives of the European Comenius project MuViT. The project engages primary pupils across the world in multilingual and audio-visual reading and writing processes through the use of information technology resources. The first findings from exploratory research in Germany and in Turkey concerning the use of the program show the potential of the MuViT tools for multilingual and media education.

Keywords: multilingualism; digital stories; media education; computer-based language learning; digital storytelling; multiliteracies

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1. Introduction

The project name MuViT stands for Multiliteracy Virtual, indicating the central ideology of the project, which can be summarized as follows: language learning should emerge from the cultural, linguistic, and digital experiences that learners bring into our classrooms and aim at the further development of a broad range and new forms of literacies, including functional, visual and multimodal literacies, media competencies, plurilingual awareness and critical thinking skills, altogether understood as multiliteracies (eg. Elsner 2012: 1f.). With this in mind, the MuViT team-members, being researchers in the field of first, second and/or foreign language acquisition, teacher educators, teachers, and IT-specialists from Germany, Spain, Turkey, Latvia, and Russia, searched for a simple-to-use tool which could put this multiliterate notion into practice by enhancing multilingual learning and likewise the development of language awareness through the use of new media. Since the project beginning in January 2011, the goal has been to develop, implement, and evaluate a concept for the use of digitalised, multilingual talking books allowing learners to simultaneously and autonomously work in their first language, and a second modern foreign language on the computer screen (MuVit player), alongside an authoring tool enabling children to produce and share their own multilingual storybooks within the MuViT web-community.
2. Method

2.1. Exploratory research during the project lifetime

One major goal of exploratory research is to clarify concepts, gain insight into a problem, and gather explanations. It does not seek to test hypotheses, but it may develop them. Exploratory research is appropriate if there only exists a small amount of information about a specific phenomenon. It may use a variety of methods such as trial studies, experiments, interviews, group discussions, or other tactics for the purpose of gaining information (e.g. Kleemann et al., 2009). In order to collect overall information about pupils’ interaction with and perception of the software, first inquiries with the software were conducted in the spring of 2012 based on a pre-release version of the prototype MuViT 1.0.

Subject groups were 69 mono- and bilingual fourth grade pupils from four primary schools in Frankfurt, Germany and Istanbul, Turkey. Pupils were observed while working with the software in class. Observations concentrated on code-switching behaviour of the pupils (how often and when?) and their behaviour while solving the tasks (can they solve the tasks? Do they need help? Do they make use of different languages?), and during handling the software (is the software self-explaining or do pupils need help?). Selected pupils were then interviewed using a semi-structured interview guideline focusing on pupils’ experiences with and overall perception of the programme (how did you like the work with the programme? Was it easy or difficult? How many stories did you read? How did you choose them? What did you like/didn’t you like? Is there anything you would like to improve?), and their reasons for choosing and switching languages. In another classroom in Frankfurt and in a school in Istanbul pupils were asked to work with MuViT in pairs. Their interaction was recorded and analysed with regard to the question of whether their communication showed evidence of language awareness. Questionnaires were given out to the pupils in order to determine pupils’ language background and their attitude towards their own and other languages.

2.2. Research questions

The observations and interviews should primarily fathom the potential of the software and give an answer to the following questions:

- Do mono- and plurilingual pupils make use of the different languages offered in the software?
- How often and why do pupils switch languages?
- What do pupils talk about when using the software in pairs?
- How do pupils like the MuViT programme overall?
- How easy or difficult do they find the handling of the medium?

2.3. First results

Naturally, we are aware that the data generated within the exploratory research study cannot deliver any generalisable results, but they allow for the following hypotheses construction, which will be further elaborated on in the discussion:

H1: MuVit arouses interest in and curiosity about different languages.

H2: MuVit contributes to the development of language awareness and identity formation.

H3: Pupils consciously make use of different languages when working with MuViT.

H4: MuVit contributes to media education.

3. Discussion

Generally speaking, the multilingual and multimodal experiences enabled by the software seem to exert a huge fascination for language learners. All of the observed and interviewed pupils confirmed that they liked working with the software and that they would appreciate to work with such or similar materials in the classroom in the future. When pupils were working with the software, it was interesting to observe that the mother tongue or the dominant language (spoken in school) for bilingual children is used as the major reference language. It serves as a reassurance to check if passages, sentences, or words were understood correctly. It could also be seen that
pupils actively analyse the rules and the structure of the languages that they read the stories in, which in the long run, should contribute to the development of language awareness on a “linguistic-systematic level” (Breidbach et. al. 2011: 14). Unlike in daily school situations code-switching into their L1 and their L2 can be used as a conscious strategy for language comparisons. Thus, pupils experience all of their available languages as valuable, which has a positive effect on the development of language awareness on a “social-educational level” (ibid.). The MuViT software was also presumed to have a positive influence on the development of media competencies. Our observations could show that the handling of the programme was no challenge to the pupils at all. However, pupils clearly pointed out the deficits of the software, such as no differentiation with regard to difficulty (choice of levels) or more language options. This clearly shows that pupils are able to reflect what media might be useful for. A higher learning potential is expected for the Authoring Tool where apart from the handling of the PC and software the development of presentation competencies and publishing skills play a vital role.

4. Conclusions

The MuViT tools have been invented to make a significant contribution to multilingual and media education in school. Based on first classroom observations and interviews with the target group of fourth graders preliminary insights on the application and benefits of the multilingual software have been gained, leading to various theses that need to be further explored. The observations show that pupils read and listen to the texts with great interest and that they do this in different languages of their choice. It needs to be further researched how pupils’ reading, writing, and listening skills in different languages may benefit from the work with the programme and in how far the multimodal input (audio-visual and different languages) may be especially suitable for foreign language learning and the development of language and media awareness.

5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Pre-service Chilean teachers’ perceptions of cooperative culture teaching in a face-to-face and 3D virtual environment: An exploratory study

Jaime Garcia Salinas
The University of Queensland
Brisbane, Australia

Abstract

3D virtual environments and their use in education are being discussed extensively, as they constitute a growing space for cooperative learning, play, and work which is having an impact on education in significant ways. This paper includes a literature review that sets the framework for the proposed study that explored the learning that took place in a traditional face-to-face cooperative learning environment and an online 3D virtual learning environment for teaching Australian culture to pre-service teachers of English in Chile. Two objectives were set for this project, namely exploring students’ perceptions on the role of the tutor both in a face-to-face context and a 3D virtual environment, as well as comparing both types of environments and their influence in culture learning. The method used was an embedded qualitative case study design with two units of analysis. Preliminary results show that students value tutor presence in both types of environment, that the use of the 3D virtual environment improves learning, and that cooperation develops in similar ways in both types of conditions. It is possible to conclude that within the Chilean pre-service teacher context, guidance is of vital importance for students, regardless of the environment, as a constructivist approach has been used extensively in education. The use of a virtual environment gives students a heightened learning experience, which allows learning in a more significant way. However, there is no significant difference in the type of cooperative learning that develops in the two types of environments.

Keywords: cooperative learning; virtual environments; tutor role; pre-service Chilean teachers

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1. Introduction

Widespread access to technology allows learners to have more access to Computer Assisted Language Learning (CALL) materials that let them work at their own pace (Darasawang & Reinders, 2010). Among these is the use of virtual environments (Duncan, Miller, & Jiang, 2012; Mathews, Andrews, & Luck, 2012; O’Connell & Groom, 2010; Campbell, 2009; Warburton, 2009), which are expanding spaces for collaborative learning, play, and work, having an impact on education in substantial ways (O’Connell & Groom, 2010).

The present study aimed at exploring students’ perceptions on the role of the tutor both in a face-to-face context and in a 3D virtual environment, and comparing the impact of those two types of environments. This research is
of a qualitative nature, more specifically a case study. The research questions included “What are the students’ perceptions of the role of the tutor in virtual environments and in face-to-face contexts?”, and “How effective is the use of a 3D virtual approach to teaching culture when compared to a face-to-face, cooperative learning approach?”

This study is based on Vygotsky’s social constructivism (1978). Johnson and Johnson’s theory of social interdependence (1989), and Piaget’s (1952) theory of cognitive development provided important foundations. Connectivism (Siemens, 2004) is included as a new theory that sheds light on the learning that resides in non-human appliances. Salmon’s (2011) five-stage model was used to set the type of work in the virtual environment.

2. Method

2.1 Case study

An embedded qualitative case study design with two units of analysis was implemented. This method allows more than one unit of analysis in the same single-case study as well as the use of quantitative evidence (Yin, 2009). The two units of analysis were the teacher-tutor and the group interacting face-to-face and the tutor and group interacting in the virtual environment in cooperatively structured groups. In addition, an adapted three-part questionnaire to measure cooperative work in virtual environments and in face-to-face interactions, a cultural knowledge achievement test, one on one interviews, focus groups, and observations were used.

3. Discussion

From the analysis of the interviews and focus groups responses to the interview questions, participants in both types of environments highly value the presence of the tutor. In the face-to-face group, the tutor is considered as a valuable guide, as stated in this excerpt:

I mean in this case, Miss “Tutor” she has been very supportive with the class, and I like that structure of the class. In terms of...eh...she arrives in the class, she asks, what we did, what are we going to do. And she asks every person of the group what you learnt last class, and you share with your partners. And then, at the end it’s what you have found and what we are going to do the next week or the next class.

In the case of those participants in the virtual group, the role they assign to the tutor is also that of guidance when interacting in world, as stated by case study student number 1:

In this case, the tutor, the person that is mainly eh...encouraging us to build our own learning.

The participant makes evident the promoting role that the tutor has in helping them create their knowledge based on their interactions, as seen in the social constructivist views of Vygotsky (1978) and the zone of proximal development (ZPD). This behaviour is also closely related to stage number 2 in the model proposed by Salmon (2011), “online socialization”. This is reinforced by the participant, who says:

I think that the connection that she is doing and how she encourages us and how she asks for information, and the ways that she makes us participate in the project, have been a very good task, quite entertaining, and also...is like a role model, like I want to be almost like that person when I’m going to teach to my students because is not just being there typing, she also gave us the confidence to speak.

In addition to that, participants reaffirm their idea of having a tutor in the virtual environment as stated in the focus group discussion

But I think that for all the groups of work it essential to have a tutor or someone that take the control of the group because if we are group, all of us has different roles and we need someone who can give us orders to follow to accomplish a certain goal.

In addition to the qualitative information from the interviews, the use of the quantitative information from the achievement test and questionnaire supports that in both types of environments tutors foster learning.
The results from the achievement test show that those students who made use of the virtual environment got better results than those who worked in the face-to-face environment. Virtual group students performed significantly better than the face-to-face group at time 1. As a result, in order to evaluate whether the type of learning received influenced test results, there was the need to control for this time 1 difference. Consequently, an ANCOVA (Analysis of Covariance) was conducted, which controlled for the time 1 difference between groups. The results from the ANCOVA, see Table 1, revealed that the Virtual Groups Time 2 score was significantly better than the Face-to-Face Groups Time 2 score, after controlling for the Time 1 difference.

Table 1: ANCOVA results for differences between the Virtual Group and Face-to-face on test score

<table>
<thead>
<tr>
<th></th>
<th>Time 2</th>
<th>F-test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face to face</td>
<td>4.124 (.217)</td>
<td>5.291 (1, 36)</td>
<td>.02</td>
</tr>
<tr>
<td>virtual</td>
<td>4.917 (.197)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results show that students performed better on the test from receiving virtual learning compared to face-to-face learning. Importantly though, when examining within group differences, both face-to-face and virtual groups performed significantly better at time 2 compared to time 1 (see Table 2). Therefore, both styles of learning significantly impacted on performance, however, virtual group performed better than face-to-face group at time 2.

Table 2: T-tests within groups performance at Time 1 and Time 2 for each learning group

<table>
<thead>
<tr>
<th></th>
<th>Time 1</th>
<th>Time 2</th>
<th>T-test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face to face (18)</td>
<td>2.56 (.452)</td>
<td>4.22 (.40)</td>
<td>-14.619</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Virtual (21)</td>
<td>3.54 (.745)</td>
<td>4.84 (1.01)</td>
<td>-4.272</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

In the case of the questionnaires, a repeated measure analysis was conducted to control for differences. Analysis show that for the first component of the questionnaire, “Key elements of successful cooperation”, there was significant group difference, $F (1, 37) = 6.49, p = .015$, but no significant time effect and no interaction effect, $F (1, 37) = .80, p = .376$ for both effects.

For the second component of the questionnaire, “The motivation, participation and attitude”, there was a significant group difference, $F (1, 37) = 5.19, p=.029$ and time effect, $F (1, 37) =8.526, p=.006$, but no interaction effect, $F (1, 37) = .45, p=.51$.

For the third component of the questionnaire, the behaviour for the small group, there was a significant group difference, $F (1, 37) =13.34, p=001$ but no time effect, $F (1, 37) =1.25, p=.270$ and no interaction effect, $F (1, 37) = .13, p=.725$.

4. Conclusions

Based on the results obtained from the tests and questionnaire analyses, in conjunction with the information contained in focus groups and interviews, it is possible to say that pre-service Chilean teachers claim to need and value the presence of a tutor as a guide, scaffolding their learning and directing the learning process that is regardless of the type of environment.

The use of a virtual environment for learning is very effective, as shown in the achievement test results, as it highly fosters the learning of new content, making the experience more vivid and appealing.

The similarity in the cooperative learning skills developed by both groups can be related to the participants’ learning experiences in which a teacher-centered approach has been vastly used in the Chilean educational context, making use of a conductivist approach that has just begun to be removed from educational practices.
One limitation to this study was the lack of proper internet connection and appropriate computers for those pre-service teachers working in the virtual environment. Another was the limited number of participants, which does not allow for generalizations and sets the basis for trying a more extensive sample to check whether the results are similar.

5. References


Abstract

This paper focuses on the results of a project conducted with university students in Spain to explore the benefits and drawbacks of using instant short messaging systems such as WhatsApp to improve learners’ reading skills in English as a foreign language (EFL). The authors will report on the rationale underlying the project, the pedagogical criteria applied, the methodology used and the overall results.

Keywords: e-learning; m-learning; reading comprehension; SLA teaching methodology; SLA motivation; text-messaging; university students.

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1. Introduction

This study is contextualized within recent theories dealing with ubiquitous learning and the idea of using a mobile phone as a support tool for working alone on assigned tasks, as sustained by researchers such as Lu (2008), Kennedy & Levy (2008), and Cavus & Ibrahim (2009). Based on Gu et al.’s (2011) guidelines, the study was organised according to the following design principles regarding (a) content, (b) activity and (c) usability. The content (a) has to be practical and micro; that is, it has to address a learner’s practical needs. These self-contained learning objects have to fit into small slots of time. The activity (b) has to be micro and simple; that is, each activity should be made through one action “such as listening, reading or pushing a button to input feedback. The usability (c) of the mobile activities has to focus on the needs to keep learners' attention and to keep content fresh in their mind” (Gu, 2011:4).

The guiding hypotheses were the following: (i) learners find using a mobile phone for language learning motivating; (ii) learners have a sense of on-going language acquisition when working on assigned tasks using their smartphones; and (iii) using a smartphone does not necessarily imply an increase in cost compared to other methods.
2. Method

These hypotheses were partly based on the conclusions of a previous study (Gutiérrez-Colon Plana et al., 2012) to analyse the advantages and disadvantages of using mobile telephone short messages (SMS) as a learning tool. This study concluded that students found the experience engaging and innovative. There was evidence that the subjects preferred receiving short, direct exercises (contained in one SMS), which could be answered immediately and did not require them to use any other additional reference materials. The study also looked into the optimal frequency of SMS reception and concluded that 3 weekly messages met student expectations without an increase in workload. The limitations of the study were related to the use of SMS, basically because it incurred an additional cost, and to how time-consuming the methodology was for the teacher, who, despite being able to send bulk messages, received learner responses to exercises individually.

This, together with the fact that there is an unquestionable need for Spanish university students to improve their reading skills in English for academic purposes, led us to believe that there was a need to provide learners with additional reading practice aimed at reinforcing their reading habits and to encourage a taste for reading in the L2. Because intermediate level learners find the task of reading long specialized texts daunting, we decided to use the model in the above-mentioned study and provide students with short reading texts that could be accessed from their mobile devices, with quick reading comprehension checks to reply to. In order to overcome the problem encountered in the previous study of having to pay to respond to messages, we decided to use WhatsApp, a popular instant messaging programme that is free for the first year.

The group of participants was made up of 95 learners studying English language as part of their degree at two universities in Catalonia. Their target level was B2 according to the Common European Framework of Reference for Languages (Council of Europe, 2001). To this end, the micro-activities were designed using texts belonging to the Quantum LEAP online learning environment and Macmillan’s One Stop English website. Both of these sources had already been pedagogically tested with EFL learners. The 12 texts used were then segmented into three parts and a reading comprehension question designed for each of these. Exercises included a balanced number of typologies: 12 multiple choice, 12 gap-filling, 12 True/False, plus one open ended question, adding up to a total of 37. During the 12-week period, three exercises were regularly sent each week—on Mondays, Wednesdays and Fridays. Approximately 50% of the texts delivered included two different exercise types.

For ease of delivery, the texts and comprehension questions were administered through SurveyMonkey. Students received the link to the reading comprehension texts in a WhatsApp instant message usergroup and merely had to click on the link to view the text and click once again to answer the comprehension question and check if the answer was correct, thus keeping learner input quick and simple to avoid discouragement (Gutiérrez-Colon Plana et al., 2012).

An initial questionnaire was sent to participants to gather information on their reading habits in English. A final survey upon completion of the experiment was also carried out to explore student satisfaction. In the following section we shall discuss some of the findings.

3. Discussion

As can be seen in Figures 1 and 2 below, according to the results of the initial questionnaire, at the outset of the project nearly 60% of the students reported that they sometimes read in English and approximately 55% of these said they felt at ease when doing so. We were surprised that their disposition toward reading was higher than initially anticipated.
Upon concluding the project, however, 90.63% of the respondents acknowledged that their participation in the project had increased their motivation to read in English (see Figure 3). Consequently, this added motivation had led to a higher tendency to approach written English texts for academic purposes.

The final survey, which consisted of an open-ended questionnaire in order not to gear students toward specific aspects, also depicted the areas in which the learners perceived that they had benefitted the most. This is summarised in Table 1 below, together with the number of students who pointed out each of the positive aspects of participating in the experience.

Table 1: Positive aspects mentioned by participants

<table>
<thead>
<tr>
<th>Positive aspects</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>I got into the habit of reading frequently in English.</td>
<td>12</td>
</tr>
<tr>
<td>The design of the project was simple.</td>
<td>12</td>
</tr>
<tr>
<td>I learned new vocabulary.</td>
<td>11</td>
</tr>
<tr>
<td>The project was motivating.</td>
<td>8</td>
</tr>
<tr>
<td>I could participate at any time.</td>
<td>7</td>
</tr>
<tr>
<td>I improved my reading comprehension.</td>
<td>6</td>
</tr>
<tr>
<td>You could answer the exercises quickly.</td>
<td>6</td>
</tr>
<tr>
<td>There was a good variety of texts to read.</td>
<td>5</td>
</tr>
</tbody>
</table>
I improved my English.  
I liked the multiple-choice questions.  
I liked the fact that there was feedback for most questions  
The readings were interesting.  
You can answer the questions from anywhere.

The drawbacks encountered by the students are summarized in Table 2. There were comments relating to the frustration of not knowing the correct answer to a comprehension question and the fact that the actual reading texts sent were short excerpts of a whole text, which negatively affected comprehension. The exercise type reported to be the most difficult was the gap-filling one, possibly because it was the only activity where they had to write some text themselves to answer the comprehension question. Two students also suggested that each exercise should build upon the next, progressively increasing the language level in order to increase the challenge of responding correctly to the questions. This comment could perhaps be seen to relate to the gaming culture, which is currently so popular among young students, where advancing is subject to achievements.

Table 2: Negative aspects mentioned by participants

<table>
<thead>
<tr>
<th>Negative aspects</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>There was no feedback for the fill-in-the-blank questions.</td>
<td>3</td>
</tr>
<tr>
<td>Some of the questions were poorly formulated</td>
<td>2</td>
</tr>
<tr>
<td>The texts were too short</td>
<td>2</td>
</tr>
<tr>
<td>The increase in difficulty of the texts was not progressive.</td>
<td>2</td>
</tr>
<tr>
<td>My mobile connexion was slow.</td>
<td>2</td>
</tr>
<tr>
<td>There were some periods without messages.</td>
<td>2</td>
</tr>
<tr>
<td>There were few exercises.</td>
<td>1</td>
</tr>
<tr>
<td>The period of the project was too short.</td>
<td>1</td>
</tr>
</tbody>
</table>

Lastly, another aspect to bear in mind is the drop-out rate and the possible reasons for the decline in student participation as the semester progressed. In the following diagram, we can see that the initial 95 subjects decreased to less than 50%; that is, a remaining total of 37 students completed all the tasks, as well as the tests and final survey. As mentioned before, this was probably due to their voluntary participation. This naturally leads us to conclude that more learners would benefit from the methodology should the activity be an integral part of the syllabus.
Figure 3: Rate of student participation in the 15-week project. The 0 participation weeks correspond to school holidays.

4. Conclusions

Regarding the actual process of implementing this reading comprehension reinforcement method, what prominently stood out was the need to create a teacher-independent application to automatically send all the text messages and exercises to avoid relying on a teacher’s constant availability to send the messages according to a set schedule.

Concerning the use of the instant messaging system, in order to avoid creating a WhatsApp group with all the subjects (nearly a hundred users), which might have encouraged learners to divert from the focus of the method and interact amongst themselves regardless of the experiment, the learners were distributed into groups of 10 and the messages sent in sequenced bulks.

To conclude, despite the various limitations, a vast majority of the students reported a high level of satisfaction and agreed that not only had their willingness to read in English increased, but the experience had also had a positive impact on their reading habits, and had resulted in more regularity and confidence.

5. Acknowledgements

This project was co-funded by the Universitat Rovira i Virgili in Tarragona (Catalonia, Spain) and Banco Santander as a part of the LINE Programme (Ref. LINE1104). It has been granted the 2013 University Council Award: Premi del Consell Social de Qualitat Docent 2013.

6. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Learning for the long haul: Developing perceptions of learning affordances in CALL teachers

Karen Haines

Unitec

Auckland, New Zealand

Abstract

This presentation reports on an investigation into situated teacher learning and their developing understandings of the affordances of new computer-mediated communication (CMC) tools. In-service teachers need to identify the affordances that a new tool offers for language learning in order to make decisions about which technologies they will choose to support their teaching practice. While general typologies of affordance have been identified for technology use in learning, the kinds of affordance that language teachers perceive in technology have not been specified. Sixteen tertiary teachers in Australia and New Zealand were interviewed over a period of fourteen months with reference to the knowledge they acquired around the use of new technologies in their classrooms. The term ‘learning affordance’ was coined to describe ways in which teachers perceived use of CMC tools promoted language learning in the classroom. Participants identified that new tools allowed students to engage not only with the traditional content of language learning (language skills and learning about the L2 culture) but also to engage with the processes of learning language (in relation to communication, affective factors and autonomy). Teachers also saw affordances for their teaching in relation to these areas. Implications for in-service teacher development include supporting participatory activities for on-going teacher learning such as inquiry, observation and reflection.

Keywords: affordance; teacher education; CMC technologies

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1. Introduction

In-service teachers need to identify the affordances that a new tool offers for language learning in order to make decisions about which technologies they will choose to support their teaching practice (Chapelle, 2006; Chapelle & Jamieson, 2008). The term affordance was originally coined by the perceptual psychologist Gibson (1979) to denote action possibilities that exist between a tool in the environment and an organism which perceives the tool in relation to its own capabilities. A key aspect of affordance is that it is situated in the relationship between user and artefact, rather than being about tools that can be developed as independent components and integrated into any learning environment (Doering, Miller, & Veletsianos, 2008; Kirschner, Strijbos, Kreijns, & Beers, 2004). In this study, the term affordance is defined as the potential that teachers perceive in a particular
technology tool that will support learning and teaching activities in their educational contexts. The attributes of the tool and the characteristics of the teacher contribute to these perceived affordances.

Being able to perceive affordance in tools is integral to developing the ‘techno-pedagogical competence’ that Guichon and Hauck (2011, p. 191) advocate, but such perceptions develop over time and are specific to individual teachers and their situated contexts. While general typologies of affordance have been identified for technology use in learning (e.g. Conole & Dyke, 2004), the kinds of affordance that language teachers perceive in technology have not been specified. This study sought to identify the specific types of affordance that in-service language teachers perceive in new CMC tools over time.

2. Method

This research was based on interviews conducted with 16 tertiary language teachers in five different institutions in Australia and New Zealand. Snowball sampling led to a largely female group, and all except one teacher were over 40 years old. All teachers had more than 15 years of language teaching experience, and only five of the 16 participants were recent users of technology as part of their teaching (had started in the last five years).

Each teacher was interviewed on two or three occasions over a fourteen-month period. Teachers were asked to identify a new CMC tool used recently and then to discuss the knowledge they had acquired through using it. Most had been using their ‘new’ tool for one to two years. Based on data collected, affordance charts were created for each participant and respondent feedback sought in successive interviews, as well as discussion about new affordances that the teachers had perceived over time in the tool.

3. Discussion

The affordances or action possibilities that the teachers in this study recognised in their individual tools were very idiosyncratic, relating to the attributes of their particular tool, but also to their own personal characteristics and to their varying intentions for use. Initially, teachers appeared to identify learning affordances that were quite general, but over time affordances were seen as much more specific to their classrooms, to particular cohorts or to aspects of curriculum that they prioritized. The value of technology is not inherent in the tool itself or its attributes, or even the tool in a specific context, but in how individual teachers perceive its value and implement this with regard to their individual contexts.

However, there were similarities in the kinds of affordances that were perceived in the CMC tools used by participants in the study. As experienced teachers, participants in this study perceived affordances for students to engage with specific language skills as well as with the culture of the target language. While identifying affordances in relation to such ‘content’ areas was somewhat predictable, teachers also identified that CMC tools could be used to support ‘process’ aspects of learning. CMC tools clearly lend themselves to opportunities for communicating with others in the target language, but teachers felt that students were also engaged with learning from an affective perspective because of the development of class cohesion, for instance. As well, teachers suggested that the use of technology afforded students’ continued involvement with language out of class time. Such perceived learning affordances relate to the ‘process’ of student engagement through communication, with learning and in autonomy.

4. Conclusion

An affordance perspective has useful implications for sustaining the professional development of in-service teachers. Having an inquiry stance around the action possibilities of a new tool can focus teachers on the tool’s potential pedagogical value rather than merely concentrating on its technical features. Observing how other teachers implement learning affordances in the classroom in relation to engaging students with content or with culture, or with learning processes themselves, such as autonomy or communication, can help with making decisions as to the value of a new tool for different teaching and learning contexts. Making such affordances explicit for initial use of tools, and supporting teachers’ reflective processes as they discover affordances that relate to their individual contexts, curriculum and the needs they identify in relation to their students’ learning are positive ways of sustaining teachers’ on-going development over time.

One of the limitations of this research is that it relies excessively on interviews as a source of data. Also, the small group of experienced participants may have found it easier to identify affordances that engage students in learning than pre-service or beginning teachers might. Further research could investigate whether students
perceive similar affordances in tools to those which their teachers identify. Finally, it would be helpful to look more closely at the degree to which the affordances that teachers perceive are realised in their classroom practice and in students’ learning.

An insight into teacher learning about technology suggested by this study is that these teachers placed importance on technology as allowing students to engage not just with the more traditional ‘content’ of language learning (language skills and learning about L2 culture) but also to engage with aspects of the ‘process’ of language learning. Affordances for communication and autonomy, as well as affordances for developing affective factors in the classroom were valued by these teachers.

5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Investigating the impact of text chat on the quality of oral production during face-to-face speaking tasks

Zöe Handley
University of York
United Kingdom

Abstract

Three modes of chat are distinguished: text, audio and video chat. Previous research suggests that each mode has a differential impact on the quality (complexity, accuracy and fluency) of the language that students produce during chat-mediated speaking tasks, and their levels of self-efficacy. For example, Smith (2004) found that during text chat students focus more on form, and Satar and Ozdener (2008) found that participating in text-chat reduced students’ levels of foreign language learning anxiety. This paper reports on the first in a series of studies planned to systematically investigate the impact of the different chat modes on the quality of the language that students produce during (and following) information gap tasks and student’s self-efficacy.

In this study text chat is compared with face-to-face communication. Given that it is not possible to directly compare text chat and face-to-face communication, following Bygate’s (1996; 2001) research, which suggests that task repetition leads to improvements in the quality of students’ oral production, the study presented in this talk investigates whether text chat and face-to-face communication have a differential impact on the quality of students’ oral production in follow-up face-to-face tasks. Analysis of the self-efficacy data found no effect of text chat on self-efficacy in follow-up face-to-face tasks.

A number of issues have arisen in the coding of the data for quality (complexity, accuracy, and fluency; CAF) and consequently the coding and analysis is on-going. The body of the talk will therefore focus on issues associated with CAF measurement.

Keywords: Computer-Mediated Communication (CMC); Task-Based Language Teaching (TBLT)

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1. Introduction

Chat increases the possibilities for offering task-based speaking practice inside and outside the classroom. All three modes of chat, text, audio and video, enable teachers to place a real information gap between students during speaking tasks, which might increase students’ awareness of their communication difficulties. Text chat, sharing features of both oral and written language (Crystal, 2001) and engaging students in nearly all of the processes involved in speech production (Blake, 2009), has the potential to provide a bridge between students’
written and oral language skills. Further, some evidence suggests that the written mode of text chat increases students’ focus on form (Smith, 2004), which might lead to increases in the accuracy and complexity of students’ productions. Moreover, text-based chat-mediated tasks have been found to decrease students’ foreign language learning anxiety (Satar & Ozdener, 2008).

The infrastructures that make audio and video chat possible have, however, only recently become widely available (Cziko & Park, 2003; Levy & Stockwell, 2006; Yanguas, 2010), and research on text-based chat-mediated tasks has tended to focus on the types of interaction (e.g. negotiation of meaning) that students engage in during tasks (Peterson, 2010). There is, consequently, little research on the impact of chat on students’ oral production from a task-based perspective. Yet most stakeholders in the use of technology in language learning are interested in the impact of technology on students’ linguistic knowledge and language skills (Donaldson & Haggstrom, 2006). This study therefore focuses on the impact of engaging in text-chat mediated tasks on the quality of students’ oral productions.

Students’ oral production naturally cannot be evaluated during text-based chat-mediated tasks, because students are communicating through text, not speech. Previous research has found that task repetition leads to improvements in the quality of students’ oral production (Bygate, 1996; 2001). This study therefore compares the impact of text-based chat-mediated tasks on the quality of students’ oral production in follow-up face-to-face tasks with that of face-to-face tasks.

Foreign language learning anxiety (Horwitz et al., 1991) is a trait as opposed to a situation-specific state. The impact of text-based chat-mediated tasks on students’ self-efficacy, that is, their belief in their ability to accomplish particular tasks (Bandura, 1997), which is known to be a key determinant of students’ anxiety (ibid.), is therefore investigated in this study instead.

2. Method

Twenty pairs of Chinese speakers of English as a second language volunteered to participate in the study which had a within-participants design. The independent variable was task condition (text chat vs. face-to-face). The dependent variables were: (1) the quality of the language produced during follow-up face-to-face tasks, and (2) students’ task-based self-efficacy in follow-up face-to-face tasks. Language proficiency was investigated as a covariate.

The materials comprised: (1) a c-test to measure of language proficiency (Klein-Braley, 1997; Daller & Phelan, 2006), (2) two open split information tasks (Ellis, 2003), each on a different topic, (3) a task-based self-efficacy self-report instrument (National Capital Language Resource Center, 2000).

Students participated in four sessions, each one week apart. In each session they completed a task, followed by the task-based self-efficacy self-report instrument. In order to avoid order effects, the order of presentation of the task conditions and the tasks was counterbalanced across dyads (see Table 1). The students also completed the c-test in the first session.

Table 1: Counterbalancing of task conditions and tasks

<table>
<thead>
<tr>
<th>Session</th>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
<th>Group D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Intervention</td>
<td>Text chat</td>
<td>Text chat</td>
<td>Face-to-face</td>
</tr>
<tr>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Task A</td>
<td>Task B</td>
<td>Task A</td>
<td>Task B</td>
</tr>
<tr>
<td>2</td>
<td>Follow-up</td>
<td>Face-to-face</td>
<td>Face-to-face</td>
<td>Face-to-face</td>
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</tr>
<tr>
<td></td>
<td>Task A</td>
<td>Task B</td>
<td>Task A</td>
<td>Task B</td>
</tr>
<tr>
<td>3</td>
<td>Intervention</td>
<td>Face-to-face</td>
<td>Face-to-face</td>
<td>Text chat</td>
</tr>
</tbody>
</table>
3. Analysis and results

3.1. Quality of the language produced

Analysis of the quality of the language produced by the students during the follow-up face-to-face tasks is in progress. It is common in research on task-based language learning to investigate the impact of task variables on the CAF of the language produced during tasks. The literature on task-based language teaching, however, provides little detail on how these have been measured. The main body of this talk will therefore comprise a discussion of the main questions raised regarding the measurement of CAF, namely:

- Which measure of the various CAF measures proposed are most appropriate?
- How much data should the measures be based on?
- When is a pronunciation error a lexical error?
- What constitutes a morpho-syntactic error?
- When is a pause a pause?

3.2. Self-efficacy

The self-efficacy data was submitted to a three-way mixed ANCOVA with chat conditions as a within-participants factor, the order of presentation of the chat conditions and the order of presentation of the tasks as between-participant factors, and scores on the c-test as a covariate. No main effects or interactions were found.

4. Conclusions

In contrast with previous research on text-chat mediated task-based language learning, which found that participating in text chat reduced students’ levels of foreign language learning anxiety (Satar & Ozdener, 2008), in this study no difference is found in students’ levels of self-efficacy in the text chat and face-to-face conditions. The absence of an effect in this study might be attributed the proficiency of the students—in this study the students were advanced learners of English studying abroad interacting with fellow non-native speakers, while in Satar & Ozdener’s study the participants were high school students—and differences in the measures used.

It remains to be seen what the impact of text chat is on oral production. Before this analysis can be completed, a valid and reliable approach to coding the data for CAF must be established.

5. Acknowledgements

This research was funded by the Department of Education at The University of York. I would also like to thank Dr. Catherine Walter, Department of Education, University of Oxford, for her insightful comments on measuring CAF.

6. References


Global Perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

CALLing on Ethiopia

Francesca Helm  
University of Padova  
Padova, Italy

Akeya Zeleke  
Adama Science and Technology University  
Adama, Ethiopia

Sarah Guth  
University of Padova  
Padova, Italy

Abstract

This paper reports on the outcomes of a CALL cooperation project between Adama Science and Technology University (ASTU) and the University of Padova. The aim of this study was to explore the short and medium term impact of a four-day CALL workshop held at ASTU. The objectives of the workshop were on the one hand to share experience with foreign language instructors at ASTU on the use of CALL, and on the other to explore the possibility of setting up a telecollaboration project between Padova and ASTU. A survey tool was used to gather data six months after the workshop and had a 70% response rate, and interviews were held with a few instructors at ASTU. As could be expected, the impact of the workshop was limited. The main criticism was that the workshop was too brief to have an impact on their teaching. Respondents also identified several obstacles to implementing CALL at ASTU, connectivity issues, the limited access and online literacy of the students and some of the lecturers. No telecollaboration projects have been set up as yet, though this project remains in the pipeline together with a firm commitment on both sides to work on overcoming barriers.

Keywords: CALL; teacher training; connectivity; online literacies; telecollaboration

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1. Introduction

This paper reports on a study of the medium-term outcomes of a cooperation project, which involved a CALL training workshop between Adama Science and Technology University (ASTU) in Ethiopia and the University of Padova in Italy. The context and motivations for the project will be described, followed by a description of the methodology of the study, discussion of the findings and conclusion.

2. Background

ASTU has been earmarked by Ethiopia’s Ministry of Education to become a centre of excellence in Science and Technology, and the School of Humanities and Law (SoHL) at ASTU provides English language courses primarily for science and engineering students. The University invested in state-of-the-art multimedia language laboratories a few years back, however the instructors have had no experience regarding CALL pedagogy and implementation other than some basic workshops held by the Ethiopian author, Zeleke, who was assigned to
manage the labs. Zeleke decided that outside expertise would be helpful in acquainting the MFL instructors with CALL and thus set about making contacts.

The two authors from Padova (Helm and Guth) responded to Zeleke’s request for cooperation. Their teaching practice and research regarding online intercultural exchange (Dooly, 2008; Guth & Helm, 2010; O’Dowd, 2007) and they were keen to involve students at Padova University in exchanges which could offer them the opportunity to engage with more global ways of seeing and experiencing the world, which are not based on Euro-centric or Westernized paradigms (Andreotti & Souza 2008). Holding a workshop at Adama was perceived to be an opportunity to try and establish an exchange with students in a part of the world which university level telecollaboration projects have largely ignored (Guth, Helm & O’Dowd 2012).

3. Training workshop

The workshop was organized to be carried out over four days, with an awareness that this could only be a ‘taster’ of CALL. A blog, CALLing on Ethiopia, was setup to be an online platform for sharing materials, the workshop programme, doing practical tasks and for establishing communication before and following the workshop. The workshop entailed interactive talks in the mornings and hands-on sessions in the computer lab in the afternoon.

About 30 participants attended the workshop, most of whom were English language teachers, but also professors of journalism, communication, public relations, German and Afan-Oromo (the second most widely spoken language in Ethiopia). All participants were male and ranged in age from their late twenties to fifties, most had over ten years’ teaching experience, but few had experience with CALL.

4. Method

The outcomes of the project were evaluated through the three authors’ reflections and discussions during and after the workshop and through a survey which Zeleke distributed to the participants in print form about six months after the workshop was held. The survey had an almost 70% response rate with 21 complete questionnaires returned. The survey tool was based in part on the Computer Literacy questionnaire used by Son, Robb and Charismiadji (2011) and some open questions regarding the workshop itself, follow-up activity and what they perceive to be the main challenges in implementing CALL at ASTU.

5. Findings and discussion

It was clear during the training workshop that the level of participants’ computer and Internet literacy was quite heterogeneous and this was confirmed in the survey findings, as well as the issues of accessibility and connectivity. All reported having regular access to a computer, but over half believed that their students did not have regular access to computers. In response to the question asking where they usually access Internet from, only four lecturers indicated from home, and four from mobile phones, while the vast majority from the university. Regarding their students, most felt that their students accessed Internet from university, and to some extent from mobile phones, but none believed their students accessed Internet from home (Figure 1).
It is not surprising then that most of the respondents thought that their students’ computer literacy skills were poor and none thought their skills were good or excellent (see Figure 2). They rated their own skills slightly better (adequate or good), but none excellent. This self-assessment might be related to the fact that 15 respondents reported being self-taught and only six report having actually received specific training in computer literacy.

The most commonly used computer tools and applications were the internet, Word processing and email. The tools that over half of the respondents reported having never used were: wikis, concordancers, video conferencing, voice chatting, online discussion groups and blogging. Fifteen (15) of the educators said they use computers for language teaching, mainly through websites and CD-ROMs (see Figure 3). However most consider the university internet connection to be unreliable—and indeed there was no connectivity during one of the workshop sessions in the lab. In addition to experience of only a limited number of computer applications, these teachers also reported limited access to academic journals.
Figure 3: Responses to questions about CALL activity

Most teachers reported general satisfaction with the workshop, with several participants reporting they had
gained insight into the potential of CALL and some practical tips. However the main complaint was that it was
too short, and some reported that they would have preferred even more practical hands-on activities. About half
of the participants reported having implemented some CALL activities after the workshop, but most said this
was not systematic as they faced challenges, such as feeling insecure about using tools as they had not had
enough training, limited access to internet and computers, unreliable connection, large class size and students’
limited access and online literacy.

No virtual exchange project has been set up yet between the two universities since none of the teachers at
Adama felt they were in a position to overcome these challenges and also to dedicate the time it would require.
However the project remains in the pipeline and both universities are going to continue working towards this
goal.

6. Conclusions

Though this was a very small scale study based on a brief workshop, the challenges encountered reflect general
problems regarding ICT in Ethiopia. In December 2011, the internet penetration rate was 0.7% (Internet World
Stats, 2013), one of the lowest in Africa, where the penetration rate is 15%. The situation does not appear to
have changed since the 2007 World Bank report on ICT in education in Ethiopia (Hare, 2007) which reported
“despite the presence of computers [in universities], most of the institutions lack a network infrastructure and
have limited connectivity. The lecturers are yet to adopt ICT as a teaching tool, and only a small number of
students use computers and the Internet as a learning resource” (p. 5).

Even in universities like ASTU, where the infrastructure and basic computer literacy have been introduced,
there are not enough skills to use the current technology along with updating knowledge with every changing
phenomenon (Zeleke et al., 2012). However the fact that one of the outcomes of the workshop was that some of
the teachers became interested in and/or have begun to use CALL and that many are asking for more training is
positive since, as Hare (2007) noted “lack of awareness of the benefits of ICT is a major hindrance to its
adoption, especially within the education sector. Most rural communities in Ethiopia, which form more than
80% of the population, have not woken up to the issues of the information society” (p. 8).

Unfortunately resources and training are still limited in Ethiopia, and the opportunities for Ethiopians to seek
training and contacts outside of their country are also constrained due largely to financial, but also other factors.
For instance, the Ethiopian author of this study, Zeleke, was awarded a scholarship to attend WorldCALL, a
further positive outcome of the project, however at the time of writing the UK Border Agency has refused him
an entry visa.
7. Acknowledgements

The University of Padova International Relations Office funded the workshops held at ASTU in Ethiopia as part of the University’s 2012 International Cooperation Projects.

8. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

How does extensive reading online influence L2 students’ motivation to read?

Hsin-chou Huang
National Taiwan Ocean University
Keelung, Taiwan

Abstract

Over the past several decades, new technologies have changed literacy education in profound ways. Texts have moved from printed forms to online materials and demanded new skills in searching and communicating online. L1 research has shown that motivational factors are important to reading development, but relatively few studies have investigated the role of motivation in L2 reading. To fill the gap, this study seeks to investigate distinct motivational patterns among EFL learners who read English texts online. The participants were freshmen drawn from two sections of an intermediate EFL reading course at a national university in Taiwan. During the semester-long experiment, students read at least one online e-book weekly from the reading list provided by the researchers, turned in reading logs on an online reading forum, and attended semi-structured interviews. A reading motivation questionnaire was administered at the beginning and end of the experiment to ascertain any motivational changes. Both quantitative and qualitative methods were employed to document students’ motivation to read e-books online and their perceptions of this e-reading program. The results showed that e-book reading had a positive effect on students’ motivations in terms of several dimensions: reading efficacy, challenge, curiosity, involvement, reading for grades, and integrative ambition. Female students in the low-proficiency group were significantly more positive about the motivational effects of e-book reading than low-proficiency male students were. Overall, students improved their image of themselves as readers as a result of this reading project. They also expressed a desire to read more e-books despite difficulties in their reading. The patterns of motivational changes found in this study can help teachers differentiate instruction and prepare students for the challenges of developing new language and literacy skills in the 21st century.

Keywords: web-based reading; extensive reading; reading motivation; new literacies; L2

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1. Introduction

Extensive reading is regarded as a robust pedagogical approach to reading instruction. It encourages students to develop overall comprehension, reading habits, and reading preferences (Day & Bamford, 1998). Second language (L2) researchers have shown that extensive reading improves literacy skills (Robb & Susser, 1989; Hafiz & Tudor, 1989; Tsang, 1996), vocabulary, and speaking (Mason & Krashen, 1997). Studies have found a positive association between reading extensively for enjoyment and motivation (Elley, 2000; Guthrie & Cox, 2001; Wang & Guthrie, 2004). Extensive reading improves motivation because students enjoy the freedom to choose texts and to engage with authentic materials (Grabe, 2009). Day and Bamford (2002) point out that
successful programs offer a wide selection of topics and genres to satisfy students’ different interests and purposes for reading. Thanks to digital technology, reading resources have expanded beyond paper-based texts to digital materials (Coiro, 2009); they provide convenience and diversity for text selection because they are readily accessible and make reading for pleasure an achievable goal.

Motivation plays a decisive role in second language learning. Gardner’s (1985) socio-educational model of second language acquisition defined motivation as a desire to become members of the target language community and to achieve the pragmatic gains of L2 proficiency, such as a higher salary. Motivation for reading, however, is quite different from motivation for language learning (Grabe, 2009). Guthrie and Wigfield’s (1997) definition of motivation as the “beliefs, values, needs, and goals that individuals have” (p. 5) is relevant because when students are involved in literacy activities related to their values, needs, and goals, they stay interested and exert more effort. Guthrie & Wigfield (2000) found that students with high intrinsic motivation used more comprehension strategies and had better reading comprehension of science texts. Students with a learning goal were relatively active readers and achieved high reading performance (Guthrie & Wigfield, 2000). Guthrie, Wigfield, Metsala, and Cox (1999) demonstrated that reading motivation could predict the amount of reading and reading comprehension level.

From these studies, Wigfield and Guthrie (1997) developed a Motivation for Reading Questionnaire (MRQ), which many L2 reading motivation studies subsequently adopted. The early MRQ version explored self-efficacy and intrinsic, extrinsic, and social motivations. Recent studies have adapted Wigfield and Guthrie’s (1997) questionnaires and developed different constructs (Mori, 2002; 2004). Mori (2002), for example, created a 30-item L2 reading-motivation questionnaire that explored self-efficacy and reading’s intrinsic value, extrinsic utility, and importance. Mori (2004) later developed a new questionnaire on the basis of Expectancy-Value Theory (Eccles & Wigfield, 1995) to re-examine the relationship between motivation and the amount of reading. Results showed that reading proficiency did not predict how much students read, whereas students’ study habits and task-specific motivations did.

Because the importance of motivation and benefits of extensive reading in L2 reading development have been confirmed, the question becomes whether digital technology’s capacity for providing extensive reading venues might improve motivation. To explore digital technology’s motivational effects, the researcher designed an extensive online reading project for EFL students and posed this research question: will online reading increase L2 students’ motivation to read?

2. Method

Eighty-one freshmen who had studied English for at least 6 years but were non-English majors (male=57, female=24) at a national university in Taiwan participated in this study. A preliminary sample TOEIC test defined three proficiency groups by their scores: 28 High-level (735 – 550), 31 Mid-level 545 - 450), and 22 Low-level (395 - 245) students. The instructor as researcher provided a list of online reading sites that included Breaking News English (http://www.breakingnewsenglish.com), The New York Times (http://www.nytimes.com/learning), and Taiwan Panorama (http://www.sinorama.com.tw/en), among others. Students could use these or other search engines to locate articles that interested them. They read three articles each week and wrote journals that summarized each article, listed new vocabulary, and offered personal reflections.

A motivation questionnaire was administered at the beginning and end of the semester to ascertain any motivational changes. Adapted from Mori’s (2002, 2004) studies and comprising 27 seven-point Likert scale items, it explored self-efficacy and reading’s intrinsic value, extrinsic utility, and importance. As for reliability, Cronbach’s alphas were .90 for the entire scale and acceptable for all four subscales: intrinsic motivation (.88), extrinsic motivation (.76), importance of reading (.83), and self-efficacy (.65).

3. Discussion

At the end of the semester-long project, students’ overall reading motivation increased (M̅pre = 4.44, SD=0.62; M̅post =4.66, SD=0.66; t=3.32, p<0.001). Within the subscales, intrinsic motivation (M̅pre = 4.00, SD=0.78; M̅post =4.21, SD=0.82; t=2.25, p=0.027) and reading’s importance (M̅pre = 5.17, SD=0.84; M̅post =5.49, SD=0.81; t=3.02, p<0.003) increased. Although extrinsic motivation (t=1.74, p=0.085) and self-efficacy (t=1.77, p=0.081) did not reach a significant level, students’ post-test scores (Mextrinsic =5.05, SD=0.89; Mefficacy =4.15, SD=0.98) were higher than their pre-test scores (Mextrinsic =4.87, SD=0.75; Mefficacy =3.98, SD=0.98).
As for the effect of proficiency on motivation, results from an ANOVA analysis showed similarities among the three groups’ overall motivation changes ($F(2,78)=2.80, p=0.07$). Extrinsic motivation, however, showed differences ($F(2,78)=4.37, p=0.01$), with the Mid-level group’s motivation increasing ($M=0.41, SD=0.69$) more than that of the High-level group ($M= -0.29, SD= 1.08$).

Digital technology provides many reading choices. When students can choose what to read, their motivation increases (Nation, 1997). Similar to previous research (Elley, 2000; Grabe, 2009; Guthrie & Cox, 2001; Wang & Guthrie, 2004), this study confirms the positive effect of extensive online reading on EFL learners’ motivation, especially on reading’s intrinsic value and importance. As students became deeply immersed in reading English online, they saw online reading’s intrinsic value and its importance as a time-efficient tool for learning English, broadening their knowledge, and coping with internationalization.

4. Conclusions

This study’s findings show that extensive online reading increases students’ reading motivation. Future studies can include more forms of digital texts, such as online reading materials supplemented by video/audio. Two limitations of this study were its short timeframe and relatively few participants; future studies can extend the time and increase students’ numbers and diversity for more generalized results.

5. Acknowledgements

This study was supported by the National Science Council, Taiwan, ROC, Project No. NSC100-2410-H-019-012.

6. References


Abstract

Digital content—text, audio, video and multimedia—is growing almost exponentially, especially in commonly taught languages and other languages with large bases of internet users. The sheer volume of this material can be overwhelming to both teachers and learners looking for material appropriate for their level. Aimed at imposing order on this chaos, CALL content curation can be defined as the collection and organization of digital content with value added by language learning experts who serve much the same role as a curator of exhibits in a museum. Here, I present the concept of curation and distinguish it from related concepts such as simple content aggregation, tagging, crowdsourcing, content adaptation, and lesson development. I then offer a preliminary framework for identifying promising sources for curation and for desirable characteristics of curated material. As an example, I briefly describe a curation project from an advanced ESL listening class, built around videos of TED talks (Technology, Entertainment, and Design) curated from the TED website and designed to support autonomous learning. This section includes a discussion of how the effective use of curated content by language learners requires informed use of a range of technology tools for extracting form and meaning in the pursuit of language learning objectives. I conclude by emphasizing the importance of content curation as a long-term priority ripe for further research and development.

Keywords: digital content; curation; listening

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1. Introduction

Content has always been a significant element in language learning classes. However, for language learners today, the culture and the people linked to the language they are acquiring are no longer available exclusively or even primarily through traditional textbooks and ancillary materials. For commonly taught and even many less commonly taught languages, authentic content of all sorts is readily available online in written, audio, and video form (and increasingly multimedia). As a supplement to communicative interactions, such materials provide the learner with contextualized language to build structural, pragmatic, cultural, and discourse competences, allowing for a great quantity and variety of language contact. However, language learners working independently must spend a lot of time locating and evaluating digital content for its language learning potential (Chapelle, 2001), often with less than satisfactory results. Given current educational movements toward promoting open access learning, learner autonomy, and lifelong learning, this is not an issue that should be ignored. A promising solution to this dilemma is content curation.
2. Digital content curation for language learning

As used here, *curation* refers to the selection and organization of material with *value added* by an expert. It is analogous to the activity of the traditional curator in an art gallery or museum. The curator in those instances is responsible for selecting items—art or artifacts—from a larger collection, organizing them into coherent groups, and presenting them to the visitors in a way that enhances their enjoyment and understanding. Curation differs from a number of related concepts, such as simply aggregating, listing, or tagging, whether done by an individual or crowdsourced. In this vein, Harris-Roxas (2012) observes, “When was the last time you went into a museum and found a pile of unrelated stuff that someone thought was ‘interesting’? That’s not a curated collection, it’s a garage sale” (par. 10). Critically, it is the organization and expert input that makes the process one of curation (Rosenbaum, 2011). Curation, as a process of selection, organization, and annotation, also differs from potentially more valuable but clearly more labor intensive activities, such as content creation, recreation, adaptation, sampling, and synthesizing.

Content curation for language learning is different from curation based solely on perceived interest or informational value: it requires the added expertise of the professional language teacher or materials developer, augmented by technology tools. Among other factors, content curators in our field need to determine the level of language difficulty—material that is too far beyond the learner’s ability to process naturally is problematic. Decoo (2010) takes a strong position on this, arguing for the importance of content systemization in making language learning efficient. Although the fineness of the leveling he proposes is not practical for most curators, a rough approximation of level that provides practical guidance to learners is achievable.

Below are some proposed qualities of useful online content for curated collections:

- Freely and legally available
- Interesting to a range of learners
- Good technical quality
- Stable
- L2 transcripts/captions (for audio or video content)
- Text readable without optical character recognition (OCR)
- Complementary materials available

3. Example: Curating TED Talks for an advanced listening course

In this section, I briefly describe a curation project for a graduate ESL advanced listening course that includes weekly independent listening projects using materials selected by the students. One of the more popular sources is the TED website (www.ted.com), which includes talks by celebrities and leaders in technology, entertainment, design, and a variety of other fields. Following the guidelines above, the TED site is free, interesting, high quality, and stable, with both subtitles and transcripts in English and many other languages. When working independently, the students tend to pick random videos based on interest, recency, or popularity, and often find the material frustrating due to the speaker’s speed, accent, or vocabulary. To reduce this frustration and improve learning efficiency, I have curated several theme-based collections of four to five talks, ordered and annotated in ways that increase their usefulness to learners making selections, including factors such as speaking speed, vocabulary level, and speaker accent.

I have used the following procedure to produce three such collections at the time of this writing:

1. Get TED database, available as a downloaded MS-Excel file
2. Skim for potential themes/candidate talks
3. Gather candidates and analyze transcripts
• Use MS-Word word count to calculate rough speaking speed in words per minute
• Use www.lextutor.ca/vp/bnc for profiling vocabulary at different frequency levels
• Skim for unusual terms, idioms, etc.

4. Listen to determine accent and other potential challenges

5. Select final group (four to five talks) and sequence

The curated collections are available at http://www.stanford.edu/~efs/693b/TED1.html. Currently, I am working with a project assistant to expand the number and range of offerings as well as to address a couple of shortcomings pointed out by users.

I have argued elsewhere that learners need to be adequately trained to use technology for language learning (Hubbard, 2013). The value of curated content is realized in how learners use the information the curation offers purposefully and skillfully. For this course, learners are trained to interpret vocabulary profiles, use tools like media player speed controls, and engage reflectively with meaning support technologies such as online dictionaries, translations, captions, and transcripts. Research and development in this area should go hand in hand with expanding and refining the notion of digital content curation.

4. Conclusion

Digital content curation is an area ripe for development in CALL, and it can be pursued at the classroom, program, or larger institutional level. The discussion, guidelines, and example above are aimed at encouraging others to explore this realm in more depth. It is interesting to note that since this project began, TED itself has embraced the concept, creating playlists (104 at the time of this writing) consisting of groups of talks curated by TED staff and various guests, like Bill Gates and Bono: see http://www.ted.com/playlists/. Some are in thematically related groups, but not in ways that improve language learning potential. This underscores the need for a different set of considerations and values when curating content for language learning.

5. References


Abstract

Technologies in Computer Assisted Language Learning (CALL) have been widely utilized and integrated in language classrooms to enhance the teaching and learning process. However, the application of CALL in the teaching of Indonesian as a foreign language is relatively under-researched. This paper discusses the process of designing and developing educational courseware material to enhance learners’ reading comprehension skill at the beginner level of Indonesian. It explores the pedagogical consideration and design of the courseware material, how it is integrated in the curriculum as a supplementary material in aiding learners’ reading comprehension and how to promote learners autonomy beyond classroom interaction. The courseware consists of five units of interactive reading materials with different topics and reading tasks. A survey on students’ perceptions of the overall design and content of the reading exercises in the courseware related to reading comprehension was conducted at the end of the semester to evaluate the effectiveness of the courseware. The feedback shows that the courseware material can provide additional reinforcement exercises that are motivating for learners to practice reading comprehension skill at their own pace. Some limitations and obstacles in the process of integrating the courseware into the curriculum and utilizing it in the classroom are also presented in this study.

Keywords: online courseware development; content; CALL application, reading comprehension; learner autonomy; motivation
1. Introduction

Technologies in Computer Assisted Language Learning (CALL) have been widely utilized and integrated in language classrooms to enhance teaching and learning process. However, the application of CALL in the teaching of Indonesian as a foreign language is still considered scarce and relatively under-researched. The Indonesian Language Program at the National University of Singapore (NUS) has attempted to embrace the paradigm shift in the foreign language teaching and learning by integrating multimedia courseware as a supplementary material to enhance students’ language proficiency beyond the classroom. The latest development completed in the program was the development of reading courseware for the beginners’ level. The project was funded by the Centre for Development of Teaching and Learning, National University of Singapore, under the Teaching Enhancement Grant.

This paper discusses the process of designing and developing reading courseware material to enhance learners’ reading comprehension skill. It explores the pedagogical consideration and design of the courseware material, how it is integrated in the curriculum as a supplementary material in aiding learners’ reading comprehension and how to promote learners’ autonomy beyond classroom interaction.

This study involves obtaining students’ feedback of the interface design for the reading courseware. Students’ opinions on the structure of the content provided in the courseware are also elicited. In addition, this study was conducted to investigate the effectiveness of the courseware integration as a supplementary platform to aid reading comprehension.

2. Method

2.1. Participants

67 students participated in this study. They were enrolled in LAB 1201 (Bahasa Indonesia Level 1) in the second semester of the academic year 2012/2013.

2.2. Procedures

This study used a mixed qualitative-quantitative method of investigation for the data analysis. The data was collected anonymously from the subjects through a questionnaire. The questionnaire, administered at the end of the semester, consists of two parts. In the first part, the participants were to respond—on a scale of 1 (strongly disagree) to 5 (strongly agree)—to 10 statements regarding the interface design and the content of the reading courseware. In the second part, the participants had to answer seven open-ended questions on their perception of the integration of the reading courseware in the course. The questions pertained mainly to learners’ motivation and the reading strategies they used in their reading comprehension skill development.

3. Discussion

3.1. Reading courseware development project and its integration in the curriculum.

Helen (2006) asserts that a good value of an interactive courseware should have an interface design that can entertain the end user and enhance the learners’ level of understandings and experiences (as cited in Kamaruddin, 2010). This online reading courseware was developed to supplement the authentic reading course pack used in the classroom. The objectives of this reading courseware are to:

- expand students’ vocabulary and improve their reading skills by providing extra interactive reading activities to supplement the core reading material.
- broaden students’ knowledge of the chosen topics discussed in class and enhance their cultural awareness of the target community.

In order to achieve the objectives, five interactive lessons were developed, as summarized in Table 1:
Table 1: Reading courseware material design

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Topic</th>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Berbelanja (Shopping)</td>
<td>Finding items at the supermarket and writing the price of the items</td>
</tr>
<tr>
<td>2</td>
<td>Memasak (Cooking)</td>
<td>Reading and following instruction in the recipe.</td>
</tr>
<tr>
<td>3</td>
<td>Transportasi (Transportation)</td>
<td>Positioning the correct location in the map and choosing the correct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>means of transportation.</td>
</tr>
<tr>
<td>4</td>
<td>Bank (Bank)</td>
<td>Choosing the correct bank forms and filling them in.</td>
</tr>
<tr>
<td>5</td>
<td>Mengenal Budaya (Introduction to Indonesian Culture)</td>
<td>Finding the five big islands in Indonesia and their respective traditional costumes and cultural activities</td>
</tr>
</tbody>
</table>

This reading courseware was introduced in week six of the semester as a part of the curriculum. The first two lessons in the reading courseware were assigned as a compulsory assignment after the students finished reading two chapters of the course pack in weeks six and seven.

3.2. Learners’ perception on the effectiveness of integrating the reading courseware as a supplementary platform to aid reading comprehension.

Computer Assisted Instruction (CAI) software including CALL is expected to meet certain standards with respect to didactics, exploitation of the computer’s capability and user-friendliness (Ephratt, 1992). Chapelle (2001) proposed to evaluate CALL applications using some general criteria, also mentioned by Jamieson, Chapelle, and Preiss (2005). They are:

1. *Language learning potential:* The degree of opportunity present for beneficial focus on form;
2. *Learner fit:* The amount of opportunity for engagement with language under appropriate conditions given learner characteristics;
3. *Meaning focus:* The extent to which learners’ attention is directed toward the meaning of the language;
4. *Authenticity:* The degree of correspondence between the learning activity and target language activities of interest to learners out of the classroom;
5. *Positive Impact:* The positive effects of the CALL activity on those who participate in it; and
6. *Practicality:* The adequacy resources to support the use of the CALL activity.

The results show that the interface design of the courseware is generally satisfactory (see Table 2). However, we note that some users found the navigation buttons to be not user friendly. The students also commented in the second part of the questionnaire that they had difficulties to access the page and find the correct exercises assigned to them, and became less motivated to use this courseware.
Table 2: Interface design of the reading courseware

<table>
<thead>
<tr>
<th>Statements</th>
<th>Frequency</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>The welcome screen which offers an overview of what the courseware is about is informative and helpful.</td>
<td>0</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>The instructions are concise, clear and easy to understand.</td>
<td>0</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>The available navigation buttons and icons are user friendly.</td>
<td>1</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>The graphics and animation in the exercises are colourful and attractive.</td>
<td>0</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>The type and size of fonts of the reading text is suitable, clear and readable</td>
<td>0</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

With regard to the reading content, 86 percent of the population agreed that the content of the courseware is well organized, structured and appropriate to their level of proficiency. We observe that the glossary link provided need to be improved to facilitate learning (See Table 3).

Table 3: The content of the reading courseware

<table>
<thead>
<tr>
<th>Statements</th>
<th>Frequency</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>The general presentation of the reading content is well-organized and structured</td>
<td>0</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>The exercises are interactive and fun.</td>
<td>0</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>The selected passages are interesting.</td>
<td>0</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>The vocabulary used in the reading passages and exercises are appropriate to your level of proficiency</td>
<td>0</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>The glossary link provided is informative and helpful.</td>
<td>0</td>
<td>2</td>
<td>16</td>
</tr>
</tbody>
</table>

Pertaining to whether the reading courseware can motivate students to practice on their own, 46 respondents agreed that this platform help them to increase their motivation. Due to its interactive nature, the courseware makes learning fun compared to typical traditional reading lessons they had in class. The other 21 respondents feel that this reading courseware do not have impact in increasing their motivation due to technical problems, time constraints, and no mark incentive given to do the exercises in the courseware.

In terms of reading strategies, the results show that previewing, predicting and reflecting are the most common strategies used by the respondents. It is interesting to discover that 23 respondents mentioned that they were still unaware of using any reading strategies to improve their comprehension while they were completing the exercises in the courseware. Therefore, it is necessary to provide extra tasks to raise students’ consciousness of different reading strategies available in this courseware material.
4. Conclusions

The findings suggest that the integration of the reading courseware as a supplementary material provide additional reinforcement exercises for learners to review what has been discussed in class at their own pace. The majority of the population agreed that due to its interactive nature, the courseware make them more motivated to practice further on their own and be in control of their learning to improve their reading comprehension. However, there are some issues need to be considered and evaluated further to ensure the effectiveness of CALL application to facilitate learning. Design is fundamental in CALL application when theory is put into practice in the structuring of CALL tasks and programs (Levy & Stockwell, 2006). In addition, there should be sufficient support provided to prepare the students prior to the application of CALL. They should be aware of the purpose of using CALL as a platform to enrich their learning experiences. It might be interesting for further research to do longitudinal study on the implication of CALL application to develop different learning strategies.

5. Acknowledgements

The writer would like to express her gratitude to Johanna Wulansari Istanto, the convenor of the Indonesian Program at Centre for Language Studies, NUS and Jeniati Prasitio for their collaboration in developing the courseware reading material as a part of the material development project entitled “Integrating Communicative Practical Grammar, Online Authentic Reading Materials and Pod-casting in Learning Indonesian as a Foreign Language”, funded by the CDTL Teaching Enhancement Grant 2010/2011.

6. References


Interactive Digital Kitchen as a language learning tool: Applying Activity Theory to understand the scenario

Nor Fadzlinda Ishak
Newcastle University
Newcastle, United Kingdom

Abstract

This PhD project aims to investigate the impact of a newly developed technology—the Digital Kitchen—towards English language learning. This is a mixed methodology study focuses on the question: What is the outcome of the same cooking task when it is carried out in a normal kitchen compared to a kitchen equipped with digital technology? This is answered by investigating users’ achievement in vocabulary tests, users’ feedback and the video recording of the activity. Eight (8) out of 54 intermediate level English learners who took part in the overall study were chosen to represent the experimental and control group with one group using the Digital Kitchen and the other group in a normal kitchen setting. The Activity Theory is employed as a descriptive tool in analysing the qualitative data—exploring the activities that took place and specifically looking at how the instrumented kitchen as the artefact may be able to influence the quantitative findings (the tests scores) in the first part of the study. Overall, it was found that the Digital Kitchen as a meditational tool had an impact towards the distribution of labour in the community which had affected the outcome of the activity.

Keywords: digital kitchen; digital; technology; activity theory; activity system; vocabulary; task-based.

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1. Introduction

The Digital Kitchen was a further development of the Ambient Kitchen (Olivier, Guangyou, Andrew, & Jesse, 2009) which was first developed to help people with dementia. The Digital Kitchen is equipped with sensors and different wireless communication technologies. Basically, this kitchen speaks to users in English and gives step-by-step instructions as it receives evidence from the sensors that the participants have carried out the stages of the task. Meanwhile, the students can interact with the system that controls the kitchen via a graphical user interface (GUI) displayed on a touch screen. The interface allows them to request for a repetition (which would also give them the written text of the instruction), to receive translation and even skip or go back to certain instructions.

Funded by the Engineering and Physical Sciences Research Council (EPSRC) Digital Economy Programme on “Research in the Wild: Getting research out there”, the brand new Digital Kitchen was first built for the French Kitchen Project and is still undergoing some technical enhancements. Theoretically, the project aims to develop the next generation of technology applied to language teaching, namely the use of digital sensors together with a task-based learning approach (Seedhouse & Olivier, 2009).
The French Kitchen project has demonstrated that the kitchen does help to promote language learning (Seedhouse et al., 2013) and this finding is parallel to the qualitative findings from the first part of the current research which had looked at the test scores of the pretest, post-test and delayed post-test administered to test the retention of 20 new vocabulary items. The ANOVA and t-tests shows significance difference in the result of within-subjects and between-subjects of the two groups, with the experimental group performing significantly better than the control group (Ishak & Seedhouse, 2012). Thus, this paper intends to investigate what had happened during the task-based activity, observing students’ interactions with the tasks and how this had impacted the test scores of the vocabulary tests.

2. Methods

2.1. Participants

Eight (8) out 54 intermediate level English learners from the INTO Programme of Newcastle University who took part in the overall study were chosen based on their test scores in the vocabulary tests. Two pairs (Pair A and Pair B) from the experimental group who scored the closest to the mean score of the immediate post-test were chosen to represent the group. Meanwhile, the pairs who had lowest (Pair 3) and highest (Pair 4) score in the post-test were chosen to represent the control group.

2.2 Procedure

For the overall study, 28 of the participants were in the experimental group and completed the task in the Digital Kitchen, while 26 were in the control group and worked in a normal kitchen setting. On the day, the participants came in pairs and were first asked to do a pre-test. Then, for a pre-task the participants watched a video showing the food being prepared (highlighting the ingredients and utensils involved). They cooked a traditional English recipe (‘Apple Crumble’) as the main task. The experimental group followed the verbal prompts from the system and the control group was supposed to refer to a printed recipe. A laptop was also provided for the learners to seek online help. As the post-task, they completed a set of vocabulary exercises. Immediate post-test was then administered. The participants were also asked to complete open ended questionnaire. A delayed post-test was carried out ten days after the experiment.

2.3 Methodological framework

The research question explores the cooking activity as a whole learning process. Activity Theory was used as a framework to look at the components of the Activity System as related to cooking in the Digital Kitchen. The aim was to identify which of these components of the activity have influenced the learners’ performance in the post and delayed post-tests. This was done by analysing the video recordings, questionnaires and also the observation notes. The findings determined how the technology impacted the cooking task and learners’ performance from the lense of Activity Theory.

Activity System (based on Engeström et al., 1999) in Muller-Hartmann and Ditfurth (2010).

Level 1 in the diagram refers to the mediational tools and artefacts (internal and external mediating means or instruments) which help to motivate and achieve the object-outcome of the activity. In Level II, the subject/subject collective refer to an individual such as a teacher or a group with motives and goals targeting the object. Meanwhile, the outcome refers to the results or final products of the defined objectives. In Level III, the community refers to the people (directly or indirectly involve in the activity) who share the object with the subject. Rules and regulations (norms that restrict the activity) from within or outside the activity system
regulate actions and interactions within it. The division of labour involves how tasks are divided between community members as well as referring to any division of power and status among them.

3. Discussion

The analysis revealed that the performance of the participants in both kitchens was influenced by themselves as subjects and their objects of activity which had helped to shape their needs/motives in completion of the activity. One important finding is that the system has been regarded as the second cooking partner. Thus, the digital technology as a mediational tool had affected the distribution of labour in the community and consequently affected the outcome. As the experimental group received step-by-step instructions, each pair tends to have the same motive for each instruction and worked together to achieve the goal. Meanwhile, the control group had access to all instructions from the printed recipe and had delegated the work which led to one of them missing the target words. However, Pair 4 had scored highly because they did not delegate the work and thus shared the same goal in each instruction.

4. Conclusions

The Digital Kitchen had helped the students to share the needs/motives for each instruction to be able to come out with a shared goal in each given condition. This ensured that both students in each pair came across all the target words. Sharing goals had also initiated conversations between them. Besides, as the voice for the verbal prompts was personified, the experimental group had an advantage of having a ‘third’ person in the kitchen.

5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

The development of self-regulated learning behaviour in out-of-class CALL activities in a university EFL blended learning course

Yasushige Ishikawa
Kyoto University of Foreign Studies
Kyoto, Japan

Reiko Akahane-Yamada
ATR Intelligent Robotics and Communication Laboratories
Kyoto, Japan

Misato Kitamura
ATR Intelligent Robotics and Communication Laboratories
Kyoto, Japan

Craig Smith
Kyoto University of Foreign Studies
Kyoto, Japan

Yasushi Tsubota
Academic Center for Computing and Media Studies
Kyoto, Japan

Masatake Dantsuji
Academic Center for Computing and Media Studies
Kyoto, Japan

Abstract

This paper reports on a project conducted in a blended learning (BL) course called English for Certified Tests. Researchers in Japan explored ways to effectively implement the provision of out-of-class learning tasks, designed to improve university students’ scores on the TOEIC Listening and Reading Test, in a way in which student use of the materials was sustained. BL in our project was defined as a combination of in-class activities and out-of-class activities integrated in a single learning environment by a www-based courseware, ATR CALL BRIX (http://www.atr-it.jp/products/brix/index.html), which features a learning management system (LMS). The LMS contained a variety of learning materials to prepare students for the TOEIC Listening and Reading Test. Students were placed every week in three groups (high, mid, low) according to how often they used the LMS learning materials. An e-mentor team of one teacher and a teaching assistant sent three different needs-based messages of advice and encouragement weekly to the mobile phones of the students in each of the three groups. A self-evaluation form was completed in class every week by the students in which they reflected on their goals for that week and set new goals for the following week. On the basis of the findings of pre- and post-learning questionnaires and interviews with students, it was concluded that the e-mentor team’s messages and the use of the weekly self-evaluation form encouraged students, who had previously been evaluated as primarily dependent on teacher intervention in their learning activities, to engage in self-regulated learning.

Keywords: Self-regulated learning; Blended learning; E-mentoring; TOEIC; ATR CALL BRIX

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1. Introduction

1.1. Blended learning and self-regulated learning in foreign language learning

The term blended learning (BL) usually describes the combination of traditional face-to-face learning activities and computer-mediated learning tasks (e.g., Osguthorpe & Graham, 2003). In this project, BL was a combination of in-class learning tasks and the use of online courseware out of class. The purpose of the use of the online courseware was to nurture self-regulated learning (SRL), not to provide conventional course assignments to be completed out of class. SRL is defined as a set of proactive processes that students use to acquire academic skills, such as setting goals, selecting and deploying learning strategies and self-monitoring one’s effectiveness as a learner (Zimmerman, 2008).

Andrade & Bunker (2009), in a comparison of distance foreign language learning with blended learning, highlighted the challenge of providing learners with language output opportunities in a distance learning course. They found that learners needed output opportunities to believe that their learning was progressing and to feel a sense of achievement. Thus, if the online phase is primarily utilised for language-input learning tasks, the face-to-face classroom phase of learning can be devoted to providing students with language output opportunities in which success in the two phases is interdependent. In this way, the BL environment may enhance SRL if learners are empowered to connect the two phases through their own strategic planning and decision-making.

Jochum (2011), in an investigation of the use of BL by learners of Spanish, identified how the BL multiple delivery system encouraged SRL. Online tools provided valuable data on progress directly to the learners; and this, combined with teacher and peer feedback prompted the learners to adapt their learning strategies, and thus engage in SRL.

1.2. E-mentoring in the out-of-class phase of a blended learning environment

Mentoring is defined as a relationship in which a more experienced person, the mentor, takes a special interest in helping a less experienced person, to grow personally and professionally (Mueller, 2004). With the development of online communication technology, online mentoring, often called e-mentoring, has come to play a constructive role in teacher-student communication.

Research (Salmon, 2004; Thompson, et al., 2010) has described how e-mentoring has been used in the out-of-class phase of BL environments. It was found that although the use of digital communication channels to supplement face-to-face communication is cost- and time-efficient, exclusive reliance on e-mentoring may not result in student satisfaction with online SRL. Chang (2005) claims that teacher intervention and learners’ conscious learning is necessary for fostering SRL. Thus, teacher-student communication in both out-of-class online and in-class phases of BL environments may be needed.

2. ATR CALL BRIX

ATR CALL BRIX is a www-based courseware with a learning management system (LMS) which contains seven different learning materials for the TOEIC Listening and Reading Test: (1) study logs, (2) feedback of the achievement rates of student-set goals, (3) records of the frequency of use of the materials, (4) time spent on learning, (5) a continuous update of the average score on the TOEIC learning tasks, (6) evaluation of students’ weak points and advice for further learning, and (7) students’ rankings in comparison with other students in the course.

The courseware was used in conjunction with weekly messages of encouragement and advice from e-mentors, student in-class completion of a self-evaluation form in which students reflected on their progress and set personal learning goals, and in-class teacher-student communication in learning tasks.

3. Research question

The project sought to answer the following research question: Would this project’s BL plan lead to an observable development in student attitudes, knowledge, and skills which characterize successful SRL practices?
4. Study one

4.1. Participants

29 first-year students at a university in Japan participated in this study.

4.2. Method

The participants were provided, as out-of-class activities, with the courseware materials for improving their TOEIC scores between May and September, 2012. The materials were designed to be completed in eight weeks, and each week the records of the seven LMS materials were compiled. A pre- and post-course, the Online Self-Regulated Learning Questionnaire (OSLQ), was administered in May and in September. It included 24 items used a five-point Likert scale for ranking student responses from strongly agree (5) to strongly disagree (1). The OSLQ covered six SRL constructs (Barnard-Brak, Lan, & Paton, 2010): setting goals, structuring the learning environment, creating learning strategies, managing time, seeking help, and conducting self-evaluations. No e-mentoring was conducted between May and September.

4.3. Results and discussion

Student scores on five of the six SRL constructs significantly decreased from the beginning to the end of the course as is described in Table 1, below.

The participants originally intended to use the online materials and to develop plans to reach personally-set TOEIC score targets. However, the study log in the LMS of ATR CALL BRIX showed that they used the materials, on average, for only 6.4 minutes per week. The following comment is a typical student explanation: “I have little time to study the materials because I have so many assignments to do every day.”

<table>
<thead>
<tr>
<th>Study one OSLQ (May)</th>
<th>Study one OSLQ (September)</th>
<th>p</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal setting</td>
<td>3.30</td>
<td>2.86</td>
<td>.065</td>
</tr>
<tr>
<td>Environment structuring</td>
<td>3.78</td>
<td>3.14</td>
<td>.020*</td>
</tr>
<tr>
<td>Task strategies</td>
<td>3.08</td>
<td>2.40</td>
<td>.000**</td>
</tr>
<tr>
<td>Time management</td>
<td>3.47</td>
<td>2.68</td>
<td>.001**</td>
</tr>
<tr>
<td>Help seeking</td>
<td>3.30</td>
<td>2.13</td>
<td>.000**</td>
</tr>
<tr>
<td>Self-evaluation</td>
<td>3.34</td>
<td>2.53</td>
<td>.001**</td>
</tr>
</tbody>
</table>

*p < .05; ** p < .01

Table 1. Results of OSLQ in May and September

5. Study two

5.1. Participants

The 29 students who participated in Study one took part in Study two.

5.2. Method

Between September 2012 and January 2013, the participants were provided with the same online out-of-class courseware learning materials that were used in Study one. These materials were designed to be completed in eight weeks. Each week the records of the seven LMS materials were compiled in the same way as in Study one. Study one’s OLSQ was completed by the students in September and again in January. In contrast to the procedure in Study one, e-mentoring was a feature of Study two. The participants were placed in three groups each week of the course—high, mid, low—according to how often they used the LMS learning materials during the previous week. An e-mentor team of one teacher and a teaching assistant sent three different need-based messages of advice and encouragement weekly to the mobile phones of the students in each of the three groups. A self-evaluation form was completed in class every week by the students in which they reflected on their goals of the week and set new goals for the following week.

5.3. Results and discussion

Scores of four out of the six SRL constructs significantly increased as is described in Table 2, below. This result indicates that the messages that the e-mentor team sent weekly to the participants and the self-evaluation form in
which the participants reflected on their goals of the week and set new goals for the following week were likely effective in encouraging SRL behaviour. However, scores in January show that the May score levels were not reached (see Table 1). This indicates that e-mentoring may be more helpful if conducted in the initial stages, rather than from the mid-point, of a course.

Task strategy creation and help seeking SRL behaviours showed no significant changes in score level, although help seeking scores decreased. A possible explanation could be that the ATR CALL BRIX’s LMS gave the participants adequate advice and explained which materials should be used in order to overcome weaknesses in their study plans to improve their TOEIC scores. The following statement is a typical student statement regarding their appreciation of the LMS: “The LMS is so nice. It shows me what I can do to improve my TOEIC score.”

<table>
<thead>
<tr>
<th></th>
<th>OSLQ (September)</th>
<th>OSLQ (January)</th>
<th>p</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal setting</td>
<td>2.86</td>
<td>3.26</td>
<td>.002**</td>
<td>.57</td>
</tr>
<tr>
<td>Environment structuring</td>
<td>3.14</td>
<td>3.55</td>
<td>.030*</td>
<td>.56</td>
</tr>
<tr>
<td>Task strategies</td>
<td>2.40</td>
<td>2.45</td>
<td>1.00</td>
<td>.00</td>
</tr>
<tr>
<td>Time management</td>
<td>2.68</td>
<td>3.20</td>
<td>.000**</td>
<td>.66</td>
</tr>
<tr>
<td>Help seeking</td>
<td>2.13</td>
<td>2.05</td>
<td>.523</td>
<td>.12</td>
</tr>
<tr>
<td>Self-evaluation</td>
<td>2.53</td>
<td>2.83</td>
<td>.043*</td>
<td>.38</td>
</tr>
</tbody>
</table>

*p < .05; ** p < .01

6. Conclusion

The following research question was the focus of the project described in this paper: would this project’s BL plan lead to an observable development in student attitudes, knowledge, and skills which characterize successful SRL practices?

The results of the two studies reveal that e-mentoring out of class may be an important component in a BL plan which is intended to encourage SRL development.

Further research should be conducted to identify which types of e-mentoring may be most effective in encouraging SRL.

7. Acknowledgements

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8. References


A Moodle-based blended-learning approach for teaching English for Medical Purposes

Jun Iwata
Shimane University
Shimane, Japan

Yuko Tamaki
Shimane University
Shimane, Japan

Shudong Wang
Shimane University
Shimane, Japan

John Clayton
Waikato Institute of Technology
Hamilton, NZ

Abstract

In this globally connected world, English has become increasingly important for Japanese medical professionals. However, the curricula at medical schools in Japan are so extensive that the time allocated for English classes is usually very limited, which means those classes often do not have the depth or scope to improve medical students’ English communication skills to the level necessary for their future career as medical professionals. The authors of this paper have integrated e-learning activities created by Moodle, a popular open source learning management system, into their Medical English classes at School of Medicine, Shimane University, Japan. The main objectives of integrating these Moodle-based activities are firstly to introduce the concept of ‘blended-learning’ to students, secondly to create a ‘learning community’ where students would be able to collaboratively work on tasks both within and outside scheduled learning hours, and thirdly to give learners with more opportunities to practice their English skills by providing them with on-going access to a range of useful learning resources through Moodle. This paper outlines how the authors designed instructional procedures and integrated Moodle-based blended-learning environments for their English classes. It also reports on their students’ evaluations of their e-learning environment as measured by the questionnaire completed at the end of the classes.

Keywords: Moodle; blended-learning; English for medical purposes; students’ perceptions

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1. Introduction

English has become increasingly important for Japanese medical professionals. There is growing need for them to understand and use English at conferences and/or workshops in the presentation of papers or the exchange of ideas. As well there are ever increasing opportunities to communicate with other medical staff and patients in English (Telloyan, Iwata & Iga, 2008). Unfortunately, due to the existing extensive curricula of medical schools in Japan, English classes are usually scheduled only for the first two to three years of a six-year curriculum. This limited exposure to English is insufficient to improve students’ English communication skills to the levels necessary for their future career. Since 2007 the authors of this paper have been evaluating their current teaching practices and modifying the structure and content of their English classes to provide maximum benefit for their students (Iwata & Clayton, 2008; Iwata, Tamaki & Clayton, 2012). As part of this reflection they have designed
and deployed a range of e-learning activities in Moodle, a popular open source Learning Management System. The authors’ key drivers for the deployment of these Moodle-based activities into their Medical English classes were firstly to introduce the concept of “blended-learning” to students to make the class more effective for their English study, secondly to create a “learning community” where students would be able to collaboratively work on task both within and outside scheduled learning hours, and thirdly to give learners more opportunities to practise their English skills by providing them with ongoing access to a range of useful learning resources through Moodle.

2. Blended-learning Approach

2.1. Blended-learning

Blended learning typically involves combining aspects of traditional face-to-face activity with computer-mediated support. Blended approaches attempt to thoughtfully ‘blend’ time-constrained and place-dependent, synchronous activities, with time-independent and flexible, asynchronous activities as illustrated in Figure 1. Through a blended approach, teachers and students are encouraged to work together to improve the quality of teaching and learning. The approach makes it possible for teachers to make available, at all times, a wide variety of learning activities and digital assessments meeting a broad range of learners needs. It is anticipated this flexibility of delivery will ultimately result in improved student learning outcomes (Banados, 2006).

2.2. A Blended-learning model for teaching medical English

The authors designed a blended-learning model that consists of face-to-face instructions and structured e-learning activities (Iwata, Tamaki & Clayton, 2011). Table 1 shows a sample teaching procedure of Medical English Reading class for second-year medical students. In this example, face-to-face sessions and Moodle-based activities account for about 50% of the ninety-minute-long class.

<table>
<thead>
<tr>
<th>Procedures</th>
<th>Allotted Time</th>
<th>Moodle</th>
<th>Students’ activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Review Test</td>
<td>15 min.</td>
<td>✓</td>
<td>Work on vocabulary and listening quizzes</td>
</tr>
<tr>
<td>2 Text-based Teaching</td>
<td>35 min.</td>
<td></td>
<td>Work on reading comprehension</td>
</tr>
<tr>
<td>3 Conversation practice</td>
<td>10 min.</td>
<td></td>
<td>Work on pair/ group work</td>
</tr>
<tr>
<td>4 Further reading</td>
<td>15 min.</td>
<td>✓</td>
<td>Work on further reading using online resources</td>
</tr>
<tr>
<td>5 Forum / Assignment</td>
<td>10 min.</td>
<td>✓</td>
<td>Write one’s own idea/opinion</td>
</tr>
<tr>
<td>6 Journal writing</td>
<td>5 min.</td>
<td>✓</td>
<td>Write a journal for reflection</td>
</tr>
</tbody>
</table>

Table 1: A Blended-learning model for medical English reading class

3. Evaluation of blended-learning class

The authors have surveyed the effectiveness of the blended-learning model by asking students the following three questions:

1. Do you think that the blended-learning model in class was effective for your English study?
2. What do you think about the ratio of face-to-face instruction and Moodle-based activities?
3. Which Moodle functions do you think helped you with your English study?

The results of the evaluation for 2012 fall semester Medical English class are illustrated in Tables 2, 3 and 4. The results obtained from Question (1) (Table 2) indicate the significant majority (86.5%) of the students thought the blended-learning model was effective for their Medical English study. The result obtained from
Question 2 (Table 3) indicates a significant majority of students (76.1%) thought that ratio was well-balanced, with 18.4% students wanting a more LMS-based activities and 5.3% wanting more face-to-face instruction.

<table>
<thead>
<tr>
<th>(1) items</th>
<th>number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very effective</td>
<td>28</td>
<td>30.4%</td>
</tr>
<tr>
<td>Effective</td>
<td>52</td>
<td>56.8%</td>
</tr>
<tr>
<td>Neither</td>
<td>7</td>
<td>7.6%</td>
</tr>
<tr>
<td>Not so effective</td>
<td>4</td>
<td>4.3%</td>
</tr>
<tr>
<td>Not effective at all</td>
<td>1</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

Table 2: Result of Question (1) (N=92)

The results obtained from Question (3) (Table 4) highlight that learners valued Moodle quiz functions higher than any other function. This is illustrated by the top learning activities, ‘Dictation’, ‘Spelling’ and ‘Matching’, all been based on the quiz function. Approximately one-third of the students found ‘Feedback’ from their teachers on their test results, ‘Resources/Links’ and ‘Grade’ were helpful for their study. ‘Forum’ and ‘Journal’ were the least appreciated functions.

<table>
<thead>
<tr>
<th>(2) items</th>
<th>number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>We want a lot more Moodle activities</td>
<td>4</td>
<td>4.3%</td>
</tr>
<tr>
<td>We want a little more Moodle activities</td>
<td>13</td>
<td>14.1%</td>
</tr>
<tr>
<td>Well-balanced</td>
<td>70</td>
<td>76.1%</td>
</tr>
<tr>
<td>We want a little more F2F instruction</td>
<td>3</td>
<td>3.2%</td>
</tr>
<tr>
<td>We want a lot more F2F instruction</td>
<td>2</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

Table 3: Result of Question (2) (N=92)

These results indicate that in general, learners seem to think that the blended-learning model was effective, the ratio of blending of face-to-face instruction and Moodle-based activities was appropriate, and that Moodle functions providing automated feedback, such as quizzes, helped them with their studies. However, creating a “learning community”, one of the key drivers of this blended-learning approach, was not successful yet, as ‘Forum’ function was not highly evaluated by the students. While students’ expectations of e-learning were high (Iwata, Tamaki & John, 2012), their readiness for online discussion still seems to be low.

4. Conclusions

The initial findings from evaluations of the blended-learning approach for 2012 Fall semester Medical English class at Shimane University Faculty of Medicine indicate students appreciated the blend of face-to-face instruction and Moodle-enhanced activities designed for the class. They found the model to be effective in improving their English language skills. However, this approach did not seem to be successful in help creating learners’ learning community.

The authors are conscious that there are limitations to this study in that the sample, based within one institution, and of limited size, is a sample of convenience and thus not truly representative of all current students in English for Medical Purposes classes in Japan. However, the authors believe the further practice of the Moodle-based
activities, adapting a blended-learning model in class and development measures for evaluating blended-learning approaches would be valuable in enhancing and monitoring the effectiveness and efficiency of the blended-learning model in English for medicine classes.

5. Acknowledgements

This research was partially supported by the Ministry of Education, Science, Sports and Culture, Grant-in-Aid for Scientific Research (C), 24501189, 2012-2014.

6. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Dynamics of sustainable pedagogical development: Insights from higher education language teaching

Juha Jalkanen
University of Jyväskylä
Jyväskylä, Finland

Abstract

Recent studies in the field of language teaching and learning have indicated that there is a mismatch between promise and reality: the emergence of new technologies has not lead to the development of new pedagogies. The paper discusses the drivers behind changes in higher education language teaching and language teacher education in the light of the current policy documents and theoretical perspectives. Against that background, the results of a four-year doctoral research project will be discussed. The project consists of two sub-studies that have made use of design-based research. The first sub-study (2009–2011) was conducted among teacher students at the University of Jyväskylä, in which design practices of language teacher students were investigated. The second sub-study was an on-site development project (2009–2011), in which language courses were systematically developed in collaboration with in-service teachers at the Language Centre of University of Jyväskylä. The results of these two sub-studies discussed in the paper give insight into what key factors constrain sustainable designs for language teaching and learning. The results of the two studies indicate that (1) focus on teaching, (2) unreflective design process and (3) assumptions of learner competences constrain sustainability in teacher education and higher education language teaching.

Keywords: Higher education; teacher education; pedagogical development; sustainability

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1. Introduction

At the core of this paper is the notion of sustainable pedagogical development (SPD). Put briefly, it means the development of pedagogical resources that evolve and are configured over time. These resources—which can be material (e.g. teaching and learning materials), cognitive (e.g. theories and models of how people learn), and social (e.g. relationships, networks)—are constructed, negotiated, and contested in a constant flux of interaction. This paper is a part of a larger PhD research project that investigates the development of these resources and the interplay between them in order to understand what is sustainable in language teaching and language teacher education. Drawing on results of two sub-studies, this paper examines factors that constrain sustainability in the aforementioned contexts.
Behind the notion of sustainability is the notion of change that is “a political concept as much as a self-evident policy goal in higher education policy” (Saarinen & Välimaa, 2012). On a policy level, national and international strategies have, for quite some time, recognized the need to rethink and redesign (i.e. change) education to match the changing societal conditions. Building on the idea that the use of ICT will renew teachers’ practices, the strategies paint a vision of a dynamic educational system. Furthermore, the strategies state that teacher education will ensure that teachers are able to use ICT in education. On the basis of recent research, the lack of new thinking in regard to pedagogical practices seems, however, to be the status quo (Jalkanen, Pitkänen-Huhta & Taalas, 2012).

Since the beginning of the 21st century, rapid societal changes have been emerging as a result of globalization and technologization. We have witnessed a remarkable shift in the ways people access, process and produce information and in how learning takes place across networks, multiple sites and timescales (Ludvigsen et al., 2011). Both learning and technologies have become ubiquitous (Cope & Kalantzis, 2009). However, while technologies, and more specifically social media applications, offer new affordances to language teachers and learners, they also increase the complexity of language teaching and learning.

In democratic societies, literacy is often considered as essential for participation. The changes in societies as well developments in theories of learning have been followed by terms such as multiliteracies, new literacies, and digital literacies. The plural form highlights the notion that there is not just one skill to be acquired, but a tapestry of practices that take place in various settings, including digital environments.

2. Methods and approaches

The study consists of two sub-studies. The objective of the first sub-study was to investigate technology integration among language teacher students from the design perspective. In the second sub-study, the objective was to develop research-based pedagogical designs within higher education language teaching and to propose a model of mutual pedagogical development based on the empirical development cases.

The study is both interventionist and investigative. As an overall framework, it makes use of the design-based research (DBR) approach, which is often described as a development and research process that occurs in an iterative cycle of design, enactment, analysis and redesign (Design-Based Research Collective, 2003). The documented process of development as well as the outcomes of the process (course designs, student’s assignments) comprise the data sources from which the data has been constructed (see Jalkanen, Pitkänen-Huhta & Taalas, 2012; Jalkanen & Laakkonen, 2012; Jalkanen & Taalas, forthcoming). Based on a thematic analysis of the data, the study aims at building qualitative accounts of sustainability in these two settings (teacher education and higher education language teaching).

3. Discussion

The data indicates that in both contexts, the focus on teaching is the most constraining factor. In the case of teacher students, it affects the roles assigned to learners and thus their agency in pedagogical situations, which in turn shapes the pedagogical possibilities. In the empirical development cases, the focus shift from teaching to learning allowed a more flexible organization of the pedagogical setting and thus more personalized learner paths.

Another key constraint is that development endeavours do not always surpass the level of the ‘cool factor’. In the case of teacher students, the objectives of the pedagogical design and the use of technology are often not aligned. In other words, technologies are used without further consideration of whether they fit the purpose. In the empirical cases, there was a need for a reflective cycle in order to understand what actually happened when the new pedagogical design was introduced and whether it supported the learning activity. Without this reflective part the enacted designs would have most likely been interpreted on a “did work – didn’t work” continuum.

A third constraint is related to digital literacies (or digital competences). Policies and research literature echo the importance of digital competence as a component of full participation in society, but there is only a little evidence of teaching practices supporting competence development. This is often related to the false assumption that most students are “digital natives” who already possess the required skills to operate in technology-rich settings. Teacher students explicitly draw on this assumption when discussing technology-enhanced practices in
classroom whereas results of the empirical development cases clearly indicate that university students do not necessarily have these skills.

4. Conclusions

Language teachers should have the capacity and the possibility to respond to societal changes and reflect on the implications of these changes for their work. On the policy level, change is in many cases taken for granted and the complex mechanisms of change in educational institutions are not acknowledged. In teachers’ work there is not always the time to develop a theoretical understanding behind the choices made in pedagogical situations. Therefore, teacher students as well as practicing teachers should be supported in conducting small-scale development projects of their own. These projects could consist of cycles of design, enactment, analysis (reflection) and re-design. Documentation of these development processes would support teachers’ professional development as it allows teachers to reflect on the enacted pedagogical designs afterwards against, perhaps, a theoretically informed framework. Ideally, these development projects would take place across language and discipline boundaries.

5. References


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Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Metacognitive and attitudinal issues in second language collaborative projects: Improving individual self-awareness and collective dynamics

María Jordano  
UNED  
Madrid, Spain

Elena Bárcena  
UNED  
Madrid, Spain

Noa Talaván  
UNED  
Madrid, Spain

Abstract

This paper analyses the work of a group of volunteer students of English from the Tourism Degree at UNED (the Spanish national distance university), as part of a collaborative research project designed to encourage effective interaction in their virtual learning environment using the second language, and so elicit metacognitive skills via material selection and testing, and peer evaluation. The overall project involved three main stages. Firstly, the competences mentioned above were distributed among the student groups. The students then proceeded to work under the coordination of a student monitor for the selection and analysis of suitable web tools/materials. Secondly, each group passed their work on to another one and, in turn, received the work from a different group so that they could evaluate it and improve it with new information and/or resources if appropriate. This outcome was evaluated according to two criteria: the effectiveness of the collaboration itself and the quality of the tools and materials presented. Thirdly, each group presented the teaching team with the final list of resources catalogued and displayed in the different sections of the wiki. The findings of the research team regarding the achievements and limitations of the groups working on different competences are presented and conclusions are drawn regarding the process of training and familiarization with the learning management system used and the scope for improvement. This research has provided insights into ways to improve certain attitudinal aspects of the dynamics of collaborative language projects and the development of metacognitive skills through awareness-eliciting learning activities.

Keywords: Collaborative learning; Metacognitive skills; Virtual learning environments; Distance education

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6. Introduction

With the arrival of the internet in Distance Learning (DL), the way teaching and learning is undertaken has gone through a drastic change, in the sense that students have passed from studying in complete isolation to sharing their enquiries with others in chats and forums in different VLEs (Virtual Learning Environments). Many attempts that have emerged to incorporate collaborative activities in DL contexts have failed for multiple
reasons that need to be researched further in order to improve the quality of DL in general and specifically Distance Language Learning (DLL). Only a limited group of experts have focused their work further on motivation and metacognitive matters (Ding, 2005; Weasenforth, Meloni, & Biesenbach-Lucas, 2005; White, 2007). With the appearance of LMS and social networking tools, students feel a part of a group of people. However, when opting for DL education, they must be aware of the responsibility and perseverance that is required. The learner must be able to understand his/her own rhythm, taking into account work, family loans and academic background. Authors such as Parks et al. (2003) have established four different kinds of collaboration in a virtual context: “joint collaboration”, “parallel collaboration”, “incidental collaboration” and “covert collaboration”. The last type consists of obtaining information from documents or other linguistic or non-linguistic sources during the process of producing a text, and is directly related to this project. Here, the “text” is, in fact, the final product, a list of Internet resources useful for Professional English learning.

7. Methodology

The project described here has a double cognitive objective: to develop a database of resources focused on improving the linguistic competence of our students and to encourage them to work collaboratively following the communicative approach. These goals required the students to be able to find, select and try out their own resources, with the view to judging their suitability for professional English learning, and then review the work produced by other students following the same criteria. It was decided that a quasi-experimental method would be the best option to obtain optimum results within the context of our subject and institution. Data were retrieved through the following sources: direct observation of discussions in the forums, questionnaires delivered before and after the study, and message exchanges. A total of 50 students voluntarily accepted the invitation of the teaching team to take part in this project, although only 38 reached the end. They were divided into 5 groups that corresponded to the same number of linguistic competences: Lexis (G1), Grammar (G2), Oral competences (G3), Reading (G4) and Writing (G5). Each group was required to work in a fixed list of topics dealing with the tourist industry (Travelling, Accommodation, Catering, Entertainment, Environment, Culture and Administration), so that they would deal with the main areas of study in the subjects involved in the project (English for Tourism I, English for Professional Purposes and Final Degree Assignment).

8. Discussion

Most of the participants showed a preference towards certain topics. Regarding the quantity and quality of the work of each group, some differences could be appreciated, with groups 1 and 4 being more effective than the rest. As for the activity generated in the forums, the second stage saw the highest number of messages generated (see figure 1). This factor could be identified as the pitch of the experiment. As expected, all students that actively participated in the different forums used the target language to communicate, which means that one of the main objectives of the project was fully achieved.

Figure 1: Distribution of forum activity attending to the four stages

Focussing on the metacognitive results, the first messages exchanged in the initial stage focused on trying to know more about how to proceed with the different tasks. This was the first time that the students had to find their own resources without the help of any instructor and for most of them (68%), this was also their first collaborative experience. This scenario confirms the importance of delivering clear and well-structured...
instructions from the beginning to DL students, so that they can work with confidence, devoid of anxiety and frustration, as suggested by authors such as Nicol et al. (2005). In a DL context, the speed and efficiency of tutors and facilitators to answer doubts in the forum is essential for optimum group dynamics. A certain decrease in the attention to the students in the second stage was perceived (due to external matters related to in-house platform technology). This could have been part of the reason for the dropout of some of the individuals. From all the competences worked on in the project, only one could be contrasted in an exam situation, namely the written competence, which gave positive results about the usefulness of the project. From all the competences worked on in the project, only one could be contrasted in an exam situation, namely the written competence, which gave positive results about the usefulness of the project. Figure 2 shows that a high number of students stated that they were satisfied with the whole project experience and most of them would repeat a similar experience in subsequent courses in order to improve other aspects of their English capability.

Figure 2: Students’ written competence improving self-awareness

9. Conclusions

It is to be emphasized that although the LMS used in this project was completely new for some of its participants, all the students managed to solve most of the technical and methodological difficulties they encountered in a collaborative way. Students were able to collect resources on their own and review the work done by their partners, and the volume and quality of both works in general was remarkable. This research has presented insights into how to improve certain attitudinal aspects of the dynamics of collaborative language projects and the development of metacognitive skills through awareness-eliciting learning activities. Our next technological step will be to go beyond the natural limitations of this way of learning by applying it to mobile environments, which the immense majority of our DL has shown evidence of feeling ready and willing to engage with.

10. Acknowledgements

We would like to thank the sponsorship of the Ministry of Science and Innovation through ATLAS’ current project SoCallMe (ref. no. FFI2011-29829).

11. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Optimized dynamic displaying mode of chunks to improve reading efficiency

Akinobu Kanda
Tokyo Metropolitan University
Tokyo, Japan

Takane Yamaguchi
Waseda University
Tokyo, Japan

Eiichi Yubune
Toyo University
Tokyo, Japan

Ryuji Tabuchi
Mint Applications Co.Ltd.

Abstract

We have been trying to enhance learners’ Reading Efficiency (RE), using customized software with various dynamic display modes of chunked text, in a CALL environment for Japanese EFL college students. In this presentation, we first focus on the importance of the chunk, as a basic unit of sound, meaning, and syntax, in facilitating both reading fluency, or words per minute (WPM), and accuracy. Second, we mention one of the practical trainings with display software, by the use of which students read chunked texts as fast as possible, and know their WPM, followed by online comprehension quizzes, so that they can be aware of their own WPM and accuracy any time in the training. Thirdly we report on our recent studies, particularly one conducted in 2011, which investigated whether three different groups, including those who read aloud all together for fun only for 10 minutes (A), read aloud individually for reading comprehension for 10 minutes in a 90-minute class (B), and read silently for reading comprehension for 10 minutes in a 90-minute class (C), improved their RE, WPM, accuracy, and listening comprehension. From statistical analyses, we found that (i) all of the approaches helped learners improve both their RE and WPM, and that (ii) the sound-word-sync chorus reading method particularly contributed to the growth of WPM. From results of the past seven years of education and research, we believe that the dynamic chunking display modes help to improve RE and motivate English learning in a CALL environment.

Keywords: CALL software; chunk; reading efficiency; oral reading; display mode

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1. Introduction

1.1 Why chunks?
Since 2007, we have been successfully enhancing Japanese learners’ RE by using fast-reading training with a chunked text on a PC display. A chunk is a minimum unit of sound, meaning, and syntax with approximately five to seven words in one chunk with a duration of 2±1 sec. This unit of chunk enables learners to process meaning and grammar in the word order of English (Ohtagi and Ohmori 1990), not read back and forth to translate into the learners’ native language. Other studies (Kadota 1999, Yoshida 1998) show that a display method of chunked phrases and clauses could significantly enhance reading speed. In this paper, RE refers to accurate and fast text reading (Geva, E. & Yaghoub Zadeh 2006).

1.2 Dynamic display modes of a chunk in the software

We have assumed that using chunked texts in a display method would be effective for novice Japanese learners of English, who are likely to translate, to improve reading better and faster. Unlike paper-based reading, a display-driven one would propel them to read on faster. We have used a software program called Multimeda Player Mint (Mint), developed by Mint Applications Co. LTD. On the screen powered by the program, one after another underlined chunk appears with the prompter running at an average speed of oral reading so that students can follow the reading speed and be compelled to read at least at the speed of a native speaker’s voice (Figure 1). This software also measures their WPM; having finished reading, the student can answer the online comprehension quizzes and then receive feedback on WPM and comprehension rates instantly. Such feedback is expected to make students aware of their own reading speed and lead to their motivation. Aside from the above silent reading practice, in recent years, we have given students phonological-based trainings with Mint. The trainings include oral reading, repeating, shadowing, etc., done individually or all together in class in consent with chunk-based oral reading sound and a dynamic display mode on Mint.

1.3 The 2009 study

Yubune, Kanda & Tabuchi (2009) studied whether there is a difference between the effects of the mode in which one chunk after another appears but does not disappear, and those of another one in which one chunk after another appears but disappears from the screen. The results showed that the former mode helped increase learners’ REs without decreasing their anxiety about reading in English, although the latter also helped learners of another group read both accurately and fluently.

![Figure 1](image_url)

Figure 1: One display mode powered by Mint, where one after another chunk appears but does not disappear

2. Method

In 2011, in response to the above results, we carried out three different approaches to chunk-based reading treatments of Japanese university students in a CALL environment for one academic year: (a) sound-word-sync chorus reading for fun only for 10 minutes, (b) sound-word-sync individualized oral reading for reading comprehension test for 10 minutes in a 90-minute English lesson, and (c) rapid reading for reading comprehension test without sound for 10 minutes in a 90-minute English lesson. Our research questioned the differences in the learning outcomes between the three approaches in terms of reading comprehension, WPM, RE, and listening comprehension. To verify the question, we conducted between- and within-group analyses for the pre- and the post-tests, made up of 4 reading passages with 5 comprehension quizzes in each and 20 listening questions. The test items were all adopted from the pre-level 2 English Language Proficiency test in Japan. The maximum points for both reading and listening comprehension are 20. RE is calculated accordingly: WPM multiplied by the percentage of questions answered correctly.
3. Results

From the statistical analysis on the above pre- and post-tests, we found out that the optimized dynamic chunking display mode has helped to improve RE and WPM.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pre</td>
<td></td>
<td>Post</td>
<td></td>
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<td></td>
<td>Post</td>
<td></td>
</tr>
<tr>
<td>A</td>
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<td>73.21</td>
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<td>116.63</td>
<td>32.97</td>
</tr>
<tr>
<td>B</td>
<td>12</td>
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<td>29.94</td>
<td>73.65</td>
<td>30.24</td>
<td>85.11</td>
<td>24.35</td>
<td>103.13</td>
<td>24.91</td>
</tr>
</tbody>
</table>

Table 1: Change of four aspects of English ability

In terms of the effects of the three approaches on the four aspects of English ability, all the groups significantly increased in RE and WPM, and were unchanged in listening comprehension. Groups B and C improved in reading accuracy, but Group A did not change statistically. Considering there was no difference in any aspect of English ability at the pre-test, Group A significantly outperformed Group C in WPM while Group A did only marginally better than Group. On the other hand, Group A significantly underperformed when compared to Groups B and C in reading comprehension.

4. Discussion

Given the fact that learners in Group A read without having to answer comprehension quizzes and only for 10 minutes, the sound-word-sync chorus reading method can help learners read faster than the other methods, although they may just read without understanding texts due to the attempt to speak chunks correctly. In reality, at the final lesson we asked all the groups whether they were able to read faster than they had been before the training, Group A answered “Yes” more strongly than Groups B and C. Considering the two facts that reading comprehension score of Group A did not change while those of Groups B and C did improve, and that WPM of Group A increased statistically compared with Groups B and C, it can be concluded that learners of A read faster without deteriorating their reading accuracy, partly because novice Japanese learners seem to try to learn word-meaning or word-sound relation in English individually, instead of learning the whole combination.

5. Conclusions

All three approaches helped learners improve both their RE and WPM, and of the three, the sound-word-sync chorus reading method can contribute most to the increase in WPM. Further research is required on the effects of oral reading training under the same conditions in terms of the length of time of training.
6. Acknowledgements

This research is part of the study 24501196, subsidised by Grant-in-Aid for Scientific Research of Japan Society for the Promotion of Science.

7. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Does ICT teacher training bring benefits to the language classroom?

Tadayoshi Kaya
Gakushuin Women’s College
Tokyo, Japan

Abstract

The necessity of ICT teacher education has been discussed in recent years, with researchers having focused on the methodology of ICT teacher training. However, the transition from teacher training to classroom teaching has not been fully explored yet. Therefore, the present project aimed to empirically investigate the effects of ICT teacher training on the classroom, and to explore how teacher training should be conducted to benefit learners. For this project, data from five language teachers and 441 Japanese college students were collected. First, teachers participated in several ICT training sessions and learned how to apply digital techniques to their classrooms. Then, with the newly acquired ICT knowledge, the teachers conducted language lessons for over two months. By employing a comparison group pre-test/post-test quasi-experimental design, the learners’ test data were analyzed statistically, and questionnaires and interviews for teachers were examined qualitatively.

The results showed that all the trained teachers introduced new ICT techniques in their classrooms. However, they are not able to impact on the learners’ language performance, digital device use, nor belief in the use of digital technology. On the other hand, students taught directly by the ICT trainer showed positive results in language performance and behavior. The study sheds light on the possibility that regular ICT teacher training sessions (several times per semester) might not deliver good results to language learners, and on the necessity of intensive ICT training to benefit learners.

Keywords: ICT Teacher Training; Teacher Education; ICT Knowledge; CALL Research

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1. Introduction

In line with the trend of computer technology development in the language classroom, we see some teachers applying ICT devices for better language education. Although the number of such teachers is increasing, it is also true that there are still a number of teachers who are reluctant to adapt to new methods of instruction. Most current language teachers have never had any formal CALL training in their graduate schools (Hubbard, 2008), and believe that language education can be conducted without digital devices. On the other hand, the current generation of college students, who are defined as “digital natives” (Prensky, 2001), have been surrounded by digital devices from early childhood. These young people are able to integrate digital technologies naturally into their everyday lives, and are willing to utilize these devices for learning. Thus, there is a clear gap between
language teachers and students in terms of their teaching and learning styles. In order to better serve their students, it is the language teachers who need to obtain new skills (e.g., Blake, 2008; Luke & Britten, 2007).

The necessity of ICT teacher education has been discussed in recent years (e.g., Hanson-Smith, Healey, Hubbard, Iannou-Georgiou, Kessler & Ware, 2011; Hong, 2010; Hubbard and Levy, 2006), and researchers have focused on the methodology and the quality of ICT teacher training. However, the transition from teacher training to classroom teaching has not been fully explored yet. Therefore, the present project, funded by the Japanese government (MEXT), aimed to empirically investigate the effects of ICT teacher training on learners as well as on teachers, and to explore how teacher training should be conducted to benefit learners. The research questions were: (a) How do language teachers utilize their knowledge obtained from ICT training in class? and (b) How do the teachers trained in technology influence the performance of the language learners?

2. Method

2.1. Procedure

In November 2011, an empirical study was conducted and five teachers and 441 Japanese college students participated. First, the student participants took an English test and a questionnaire regarding their use of digital technology for language learning. Then, language teachers participated in ICT training sessions and learned how to apply digital devices and techniques to their classrooms. These training sessions were tailored to fit the teachers’ individual needs and schedules, and were conducted twice over a period of two months, spending five to six hours for each teacher in total. Seven different digital techniques were introduced in the training sessions: online language learning websites, corpus-driven approach, video-conferencing tools, MP3 players, online video-sharing websites, text-to-speech techniques, and electronic dictionaries. After these training sessions, the trained teachers were, then, asked to apply the technologies for themselves and examine the possibility to use them in their classrooms. Simultaneously along with the training sessions, the students received 6-10 language lessons from the trained teachers for over two months. The teachers were advised to contact the trainer when necessary and to meet him regularly to report any difficulties. Finally, in January 2012, the same English test and questionnaire were administered to the students in order to examine the effectiveness of teacher training on language learners, and the teachers were interviewed at the end of the experiment.

2.2. Data analyses

A comparison group pre-test/post-test quasi-experimental design was employed for the study, and the data from 304 students, who had participated in all the tests and questionnaires, were analyzed statistically. Also, the data from teacher questionnaires, training sessions, and interviews were examined quantitatively and qualitatively. In order to answer the aforementioned research questions, two experimental groups and one comparison group were formed. The first experimental group was the students (n=126) who directly received lessons from the ICT trainer, while the second experimental group was the students (n=142) who were taught by the ICT trained teachers (n=4). The control group (n=36) received English lessons from untrained teachers.

2.3. Results

Regarding the first research question, the data from the questionnaires and teacher interviews revealed that all the teachers integrated their acquired ICT knowledge to their classrooms to some extent. However, it was also found that the amount of time and information that was introduced to their students varied from teacher to teacher. Regarding the second research question, a series of statistical analyses (ANOVA with Bonferroni multiple comparisons and Friedman Tests) were conducted on the student data. Contrary to expectations, the second experimental group taught by the trained teachers did not show any significant differences in the students’ language performance, digital device use, nor belief in the use of digital technology. In the case of the first experimental group who were instructed directly by the trainer, there were significant improvements in their language performance and digital device use.

3. Discussion and conclusions

These results showed that all the trained teachers could not influence the language learners, even though they introduced new ICT techniques to the students. Given the fact that the trainer instead was able to positively influence the students’ performance and behavior, it could be concluded that the teacher training sessions were not enough to benefit the students. In the present study, the number of training sessions and the time spent on
training was limited due to the time constraints and workload of the language teachers. However, in order to benefit learners, more extensive and longer training sessions are necessary, even though such sessions might not be feasible in real settings. Thus, the present study sheds light on the possibility that short ICT training sessions might not easily deliver good results to language learners.

4. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

The factors that facilitate or hinder the use of ICT for language learning

Tadayoshi Kaya
Gakushuin Women’s College
Tokyo, Japan

Abstract

Language learning environments have been improving with the advance of ICT, and the youths of today have much more opportunities to try out various types of computer technology for language learning. However, a considerable number of Japanese students are reluctant to use mobile digital technology. An empirical study was conducted to investigate what kind of personal traits differentiate language learners regarding mobile ICT use. The data from more than 300 college students were analysed. However, the potential factors that could influence mobile learning were not determined statistically in the present study. Since the results were contrary to the initial prediction of the study, possible reasons and future directions are discussed.

Keywords: ICT use; use of technology, mobile learning; smartphones; individual differences

1. Introduction

Language learning environments have been improving with the advance of Information and Communication Technologies (ICT), and the youths of today have much more opportunities to try out various types of computer technology for language learning. This trend is even more prominent with hi-tech countries such as Japan. However, it is not the case that all of the Japanese college students obtain benefits from such hi-tech environments; a considerable number of students are reluctant to use digital technology for language learning. Therefore, the present study aimed to investigate the factors that facilitate or hinder the use of ICT for language learning, and the influence of these factors on learners’ language performance.

2. Method

2.1. Making the questionnaire

For this project, a prototype questionnaire was created by the researcher by considering possible indicators to explain students’ use of technology for language learning. The prototype questionnaire was then tested with five college students through individual interviews, and some items were adjusted or added to better capture the
factors. Lastly, the modified version was revised and verified with some researchers in applied linguistics, and was finalized in January 2013. The final version consists of three sections that aim to investigate students’ (a) mobile learning environment, (b) use of ICT devices, and (c) psychological attitudes toward mobile devices. In addition, demographic items (gender, age, income, major, educational level of technology, language proficiency, etc.) are also asked in the questionnaire. The total number of items is 38.

2.2. Questionnaire investigation

The questionnaire was conducted online by utilizing Google Drive (https://drive.google.com/) in consideration of its speed and convenience for data analyses (Figure 1). Using this online questionnaire, data was collected in January 2013 for three weeks in four different universities in Tokyo, Japan. Then, in June 2013, another data collection was performed for a week in order to address an issue that arose from the initial data collection.

2.3. Results

In the first data collection period, 256 college students cooperated for this research project. First, it was found that 92.6% of the participants owned smartphones, which was a significant increase from 39.80% reported in a survey conducted in 2012 (Internet Media Research Institute, 2012). According to the research by IDC Japan (2012), the smartphone shipment volume increased by 50.2% to 7,970,000 in the third quarter of 2012, and this trend in the market might have influenced the high penetration rate of smartphones observed in the present study. On the other hand, the ownership rate of tablet computers was found to be relatively low (9.4%). This figure is still quite low compared to the number reported by Consumer Electronics Association (2012) in the United States: 31.0% in the third quarter of 2012. Considering this statistic, it is strongly predicted that the number of tablet computers will also rise in the near future in Japan.

Regarding the use of smartphones for learning, it was revealed that a fairly high number of college students (63.3%) utilize smartphones for language learning, word search, information search, etc. (Figure 2 and Figure 3).

In order to further investigate the data, potential factors that might influence the use of mobile devices for learning were examined. In order to check the relationship with mobile learning habit (frequency) (dependent variable), eight different items (independent variables) in the questionnaire were statistically analyzed: (a) affluence, (b) age of first computer use, (c) use of smartphones, (d) number of friends with advanced computer knowledge, (e) use of mobile devices in class, (f) confidence in using digital devices, (g) willingness to use mobile devices in the future, and (h) reputation as a computer expert from friends. A stepwise multiple regression analysis was performed, and three independent variables were included in the final multiple regression model: (a) reputation as a computer expert from friends (β = .274), (b) number of friends with advanced computer knowledge (β = .138), and (c) age of first computer use (β = –.127). However, the coefficient of determination ($R^2$) was found to be extremely low (.116), and it was concluded to be impractical to adopt this model since it could only explain 11.6% of the dependent variable. In other words, all the eight variables were not sufficient to predict mobile learning habit (frequency) in the present study.
In order to find a better predictor for mobile learning habit (frequency), another data collection was conducted in June 2013. This second project specifically investigated the relationship between mobile learning habit (frequency) and English proficiency (TOEIC Test). A statistical analysis on the data from 71 college students revealed that there was a low correlation between the two values ($r = -0.35, p < .001$). However, the correlation coefficient was turned out to be negative, indicating a possible negative effect of one factor on the other.

3. Discussion and conclusions

Through the questionnaire research of the study, the high penetration rate of smartphones among Japanese college students was observed (92.6%). In addition, most of the college students (63.3 %) reported that they use smartphones for learning, such as second language learning, word search, information search, etc. However, the potential factors that could influence mobile learning habit (frequency) were not determined statistically in the present study. It was also indicated that the relationship between mobile learning habit (frequency) and English proficiency was negative.

Considering the aforementioned results, it could be concluded that it is still too early to capture the whole picture of the use of mobile devices for language learning. It is highly possible that adult language learners are still struggling to figure out how to use mobile devices effectively for learning. Therefore, it is suggested that a similar investigation be conducted after a few years, when the use of mobile devices for learning becomes ubiquitous or normalized.

4. Acknowledgements

My deepest appreciation goes to Dr. Hiroyuki Obari whose comments and suggestions were of inestimable value for my study. I am also in debt to Dr. Kazunari Ito, Dr. Hiroshi Furukawa, and Dr. Yuichi Kogure whose comments made enormous contribution to my work.

5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

What to consider for effective Mobile-Assisted Language Learning: Design implications from an empirical analysis

Heyoung Kim
Chung-Ang University
South Korea

Abstract

This research intends to investigate college EFL learners’ Mobile-Assisted Language Learning (MALL) in terms of (1) the selected content and design of Smartphone applications, (2) their L2 learning methods and approaches, and (3) the material factors that affect them in continuing and quitting MALL. Twenty-two (22) Korean college students voluntarily participated in this project by using mobile applications for learning English for 15 weeks. The data were collected from the survey, interviews, and mobile logs and were qualitatively analyzed. Most of the participants preferred ‘light’ contents of various types with good scaffolding devices. They were also engaged in individual and audio-lingual practices mostly for input building or fluency development, while they resisted communicative interaction and collaborative learning. Language difficulty level, degree of task demand, and engaging elements were the most critical factors in the continued use of apps. MALL was perceived as ‘extra’ work by the participants, which might be a distinguishing feature from CALL. This study provides some design implications for MALL: (1) satisfy ‘light’ principles, (2) add a sufficient scaffolding device, (3) provide field-dependent and updated contents, and (4) suggest as many individual options as possible.

Keywords: Mobile-Assisted Language Learning (MALL); Smartphone applications; empirical evaluation; L2 application design

1. Introduction

“What is effective mobile-assisted language learning (MALL)?” or “What is an effective application design like for MALL?” These questions have not been answered yet, although millions of mobile applications are now ready to replace the present CALL resources. Previous studies have attempted to define the concept of effective MALL. Recently, Kim & Kwon (2012) introduced the design and evaluation criteria for mobile-based ESL software and analyzed the strengths and weaknesses of 88 ESL apps design from their framework. They conclude that the ESL apps need to be improved by realizing mobility as a more situated, field-dependent, and collaborative form of learning whereas they seem effective in providing a learner-centered learning opportunity with ubiquitously accessible practices. However, the findings of the previous studies, including Kim & Kwon (2012) are mostly conceptual and judgmental, and empirical data from longitudinal practice have been rarely provided for an actual reference to the application design. Therefore, as a succeeding study to Kim & Kwon (2012)’s, this research intends (1) to evaluate the Smartphone app content and design again, but this time with
empirical data from L2 learners who have utilized mobile apps for language learning, and (2) to suggest implications for effective MALL content and design.

The following research questions were addressed:

- What content and design of mobile applications did the college EFL learners select and use? And why?
- How did they study? What L2 activities and approaches did they prefer and enjoy for what purpose?
- What factors of the apps affected the students in continuing or quitting MALL?

2. Method

The participants of this study were 22 Korean college students at a university in Seoul. They were sophomore or junior, and their English proficiency varied from low intermediate to high intermediate. The students voluntarily came to attend the MALL workshop. They decided to use smartphone applications for learning English on their own choice for one semester and weekly reported what and how they utilized them through SNS. Eighteen (18) of them continued MALL as a regular routine for 15 weeks.

Data were collected through (1) pre-survey, (2) weekly student logs, and (3) post-interview. The data were qualitatively analyzed to find out their MALL patterns, such as design/content preferences and viewpoints for effective MALL. As an analytical framework, Kim & Kwon’s design and evaluation criteria for mobile-based ESL software (2012) was used. Their framework was a modified version of “Integrated Framework for CALL Courseware Evaluation” (Hubbard, 2006, 2011).

3. Discussion

3.1 What content and design of mobile applications did they select and use? And why?

Students used various contents on their own preferences, and also the reasons for them to choose the apps were all different. However, the data analysis yielded some common patterns among the participants in selecting the content and design. First of all, most of the participants preferred ‘light’ materials. ‘Light’ materials meant ‘short,’ ‘easy,’ ‘requiring less attention’ and ‘fun.’ In particular, the less proficient learners mostly selected listening (e.g. video or audio) materials to reading, grammar or vocabulary etc. Their choices and their language needs were not always agreed upon. Second, the participants also showed clear preference for the contents that include various selections in terms of topics, amounts, and functions. For example, they chose regularly updated news or episodes such as podcasts, or popup-news. They also preferred story- or information-based contents such as drama or talks. Third, many of them wanted more scaffolding devices, such as bilingual scripts, a dictionary, a more various audio control or a customized notepad etc. in order to reduce their language barrier. They frequently articulated very specific functional needs on the apps.

3.2 How did they study? What L2 activities and approaches did they prefer and enjoy for what purpose?

In general, the students seemed to prefer audio-lingual methods, such as repetition, memorization, or drill practice. Most of them took MALL as an activity for input building or fluency development. They seldom attempted to communicatively interact with others although they knew that there were good opportunities, especially through SNS. In addition, they pursued only individual or individualized MALL. There was apparent resistance to collaborative MALL. It seemed that their purpose of selecting MALL was additional study or utilizing spare time. The virtue of MALL perceived by all the participants is ‘extra work’ or ‘saving time’. This perception seems to affect the participants in selecting L2 activities and approaches as well as content and design.

3.3. What factors of the apps affected the students in continuing or quitting MALL?

The critical factors seemed to come mostly from learners, their life patterns, learning style, or motivation. However, it was also revealed that the material factors also significantly affect the learners continuing or quitting MALL. First of all, language difficulty level seemed to most critically influence the continued use of apps. The participants selected and used various apps, such as words, TOEFL, TOEIC, grammar, TED Talks, CNN news etc, based on their current goals and reputations at first, but they quit or selected linguistically less
challenging or less demanding apps (no serious requirement or problems to solve). Engaging elements such as timely or field-dependent information or fun stories were also a determinant factor to continue to use the apps.

4. Conclusions

From the college EFL learner’s perception, MALL implied ‘subway-time study.’ Probably this might be a truly unique feature of MALL indicated by some early MALL researchers (Kukulska-Hulme & Shield, 2008). For this reason, their preference of MALL content, style, or design seemed a little different from the concept of effective MALL in the literature and even far distant from effective CALL. However, this study attends to the common patterns of MALL from the empirical data analysis and provides some implications for material and curriculum design of MALL for EFL learners: (1) satisfy ‘light’ principles, (2) add sufficient scaffolding devices, (3) provide field-dependent and updated contents, and (4) suggest as many individual options as possible.

5. References


Kukulska-Hulme, A. & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. ReCALL, 20, 271-289.
Improvement of EFL learners’ speaking proficiency with a web-based CALL system

Tetsuo Kimura
Niigata Seiryo University
Niigata, Japan

Abstract

Japanese EFL learners have insufficient opportunities to practice speaking English, either in or outside the classroom. A previous study showed that a web-based CALL system, English Central (http://www.englishcentral.com), which combines speech recognition technology with a video bank system, held significant potential for motivating Japanese EFL learners, as compared to other online independent-study sites. Another study found that Japanese EFL learners who had practiced English using this system, and had earned more than 40,000 points during one semester, subsequently achieved significantly increased overall scores on a speaking test. The present study confirmed the effects of the system on the improvement of learners’ speaking proficiency, after a two-semester practice period. The use of the system also had an impact on the students’ listening, reading and overall English proficiency: the more time they had spent practicing English with the system, the more their English proficiency test scores increased.

Keywords: speaking proficiency; EFL learners; web-based CALL; speech recognition; self-studying

1. Introduction

Japanese EFL learners do not have enough opportunities to practice speaking English, and they hesitate to speak English in front of their classmates. The implementation of a web-based CALL system is a handy solution to these problems, since they can practice speaking English individually anytime and anywhere, as long as they are in possession of a headset and a PC with access to the Internet. Kimura (2010) found that using English Central (EC), which combines speech recognition technology and a video bank system, resulted in higher levels of motivation in Japanese EFL learners compared with other online independent-study sites. EC scored highest for all the three questions asked at the end of the semester: 1) Do you think you can continue studying English with the site? 2) Did you enjoy studying English at the site? 3) Do you think the site is effective for your studying? The mean differences between EC and the others were significant (p<.01).

Although Kimura (2012) found that students who studied and earned more than 40,000 EC speaking points (points earned by correctly repeating sentences in the EC videos) during one semester significantly improved their overall score on a speaking test (p<.01), the correlation between the amount of practice at EC and increases
in overall test scores was rather low ($r=36$). The length of the study (only 14 weeks) was not long enough to clearly witness their improvement in English speaking proficiency. The purpose of the current study is therefore to examine the effects of EC on the improvement of learners’ speaking proficiency over a longer period.

Approximately 200 Japanese freshmen practiced speaking English individually at EC for two semesters. Their speaking proficiencies were evaluated before and after this nine-month practice period, using a Pearson Versant™ English Test, which automatically evaluates the spoken English skills of non-native English speakers, using linguistic analysis and speech processing technology.

2. Method

2.1. Speaking practice with EC

EC was introduced to 205 Japanese university freshmen in five classes as one of the four online independent-study course components, the others being Moodle reader (MR) for intensive reading, ALC Net Academy Super Standard Course (SS) for listening and reading exercises, and the Power Word Course (PW) for vocabulary building. The students were informed that 20% of their final grade would be decided by the amount of speaking practice they had done at EC, 10% by the number of words in the books they passed in quizzes at MR, 12% by the number of units they studied at SS, and 3% by the number of units they studied at PW. The rest of their grade was decided by final exams and homework assignments. They practiced speaking at EC both in and outside of class, for about seven months, from June 2012 to January 2013.

EC presents the learner’s chosen videos with or without English and/or Japanese subtitles, and at normal or slowed-down speeds. It also provides context-related definitions of words, their usage and word/phoneme-level playback. After watching the video and understanding the meaning of the sentences, the students practice repeating the English line by line. Assessments of their verbal productions are given immediately after they record them. The result of these assessments is given in numeric points, as well as in a letter grade system. Learners can listen to their own recordings, and compare them to the models. They were encouraged to continue practicing until they achieved a letter grade of B+ or better. They could earn 100 points by perfectly completing an approximately one-minute speech. They were told that 2,800 speaking points at EC would earn them 1 point on their final course score.

2.2. Evaluation with the Versant™ English Test

The Versant™ English Test used in Kimura (2012) was too difficult for some students, and no score was obtained for them. Therefore, an easier version, the Versant™ English Placement Test Basic (VEPTB), was used in the current study. The results of the VEPTB are given in terms of an overall score (OA), as well as five individual sub-scores, for speaking (S), listening (L), reading (R), typing speed (TS) and typing accuracy (TA). Two equated versions of the VEPTB were administered in July 2012 and January 2013. In addition, the CASEC (Nogami & Hayashi, 2010), a computer-adaptive English proficiency test, was administered on the same days. The students’ estimated TOEIC scores (C-TOEIC), given as a part of the CASEC results, were also compared with their VEPTB scores.

3. Discussion

Of 205 students, 49 students were eliminated from the data because they had not completed one or more of the four tests. For the remaining students, the correlation between the amount of points they had earned at EC and the increases in their VEPTB scores (OA, S, L, R, TS, and TA) and their C-TOEIC were analysed. The highest correlation was found between EC points & OA scores ($r=36$). Weak correlations were also seen between EC & S ($r=26$), EC & L ($r=0.18$), EC & R ($r=0.27$), and EC & C-TOEIC ($r=0.25$). Almost no correlations were seen between EC & TS ($r=-0.03$) and EC & TA ($r=0.04$). These results therefore indicated that practice at EC had a positive effect on the learners’ English abilities, confirming the findings of Kimura (2012).

The students were also divided into three groups according to the amount of points they had earned at EC, as in Kimura (2012): Low (EC <40,000, $n=71$), Mid (40,000 ≤EC<80,000, $n=58$), and High (80,000 ≤EC, $n=27$). ANOVA was conducted to compare the effects of the amount of practice at EC on the improvement in these learners’ abilities. Except for TS and TA, significant differences were confirmed between groups (see Table 1). Furthermore, post-hoc comparisons were conducted for OA, S, L, R, and C-TOEIC using Tukey’s HSD test. For OA, L, and R, there were significant differences between each pair of groups, except between Low and Mid.
As for S, significant differences were seen only between High and Low. As for the C-TOEIC scores, there were again significant differences between each pair of groups, except between High and Mid.

Table 1: Comparisons of score increase between the three groups (ANOVA)

<table>
<thead>
<tr>
<th></th>
<th>Low (n=71)</th>
<th>Mid (n=58)</th>
<th>High (n=27)</th>
<th>F value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>OA</td>
<td>M -0.2</td>
<td>1.3</td>
<td>5.1</td>
<td>13.78</td>
<td>.0000 ***</td>
</tr>
<tr>
<td></td>
<td>SD 4.45</td>
<td>4.45</td>
<td>4.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>M 1.2</td>
<td>2.5</td>
<td>3.9</td>
<td>2.53</td>
<td>.0828 †</td>
</tr>
<tr>
<td></td>
<td>SD 5.05</td>
<td>5.69</td>
<td>5.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>M 2.0</td>
<td>2.8</td>
<td>7.3</td>
<td>4.79</td>
<td>.0096 **</td>
</tr>
<tr>
<td></td>
<td>SD 7.96</td>
<td>7.34</td>
<td>7.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>M -3.3</td>
<td>-0.7</td>
<td>4.0</td>
<td>6.96</td>
<td>.0013 **</td>
</tr>
<tr>
<td></td>
<td>SD 9.65</td>
<td>7.86</td>
<td>8.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TS</td>
<td>M 0.4</td>
<td>0.6</td>
<td>1.5</td>
<td>0.76</td>
<td>.4679 n.s.</td>
</tr>
<tr>
<td></td>
<td>SD 4.10</td>
<td>2.81</td>
<td>5.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TA</td>
<td>M 0.1</td>
<td>0.3</td>
<td>5.7</td>
<td>1.73</td>
<td>.1801 n.s.</td>
</tr>
<tr>
<td></td>
<td>SD 12.03</td>
<td>13.10</td>
<td>19.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-TOEIC</td>
<td>M 3.5</td>
<td>25.7</td>
<td>49.8</td>
<td>7.13</td>
<td>.0011 **</td>
</tr>
<tr>
<td></td>
<td>SD 50.94</td>
<td>63.87</td>
<td>51.91</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

†: p<.10, *, p<.05, **: p<.01, ***: p<.001

4. Conclusions

The effect of EC on the improvement of learners’ speaking proficiency was confirmed. The two-semester practice with EC also had an impact on their listening, reading and overall English proficiency, as well as their speaking. The more the students had practiced English at EC, the more their English proficiency test scores increased. For example, for those who had practiced extensively and earned more than 80,000 points at EC, their estimated TOEIC scores increased by 49.8 points on average, while the estimated TOEIC scores of those who had practiced moderately at EC (earning 40,000 – 80,000 points there) increased by 25.7 points on average. In those whose practice at EC had been the least (earning them less than 40,000 points), English proficiency did not seem to significantly improve: their estimated TOEIC scores increased by an average of only 3.5 points.

As the research in the present study was carried out in an actual English course within a university curriculum and not in an experimental setting, one limitation is obviously that the effects on improvement of the students’ English proficiency may not be due purely to their amount of practice at EC. They were also able to use self-study materials other than EC, at their own pace, and these other potential explanatory variables were not able to be experimentally controlled.
5. Acknowledgement

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6. References


Global perspectives on Computer-Assisted Language Learning

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Integration of open internet resources into an ESP course of English for Complex Safety students

Marina Kogan
St Petersburg State Polytechnical University,
St Petersburg, Russia
m_kogan@inbox.ru

Nina Popova
St Petersburg State Polytechnical University,
St Petersburg, Russia
ninavaspo@mail.ru

Abstract

Two types of open internet resources have been studied for their integration into the course of teaching English as a foreign language for Russian students of technology. The research embraced one student group numbering 17 students taught during one term. The principal objectives of the research were to check the adequacy of the selected resources to the low-intermediate student level and find out more information on the ways of introducing the resources into the regular syllabus. Methods of observation, comparison and pedagogical measurement were used for this purpose.

Speech segmentation Praat program has been applied in order to cope with international vocabulary pronunciation mistakes, which are frequent in familiar words of Greek and Latin origin. Regular homework involved listening to the Breakingnewsenglish collection podcasts along with the Praat application. In comparison with 30% of words pronounced correctly at the beginning of the course, about 90% of test words were pronounced correctly at the end of the term by best students. The simulation strategy computer game Stop disasters! was successfully used as a professionally-oriented internet resource for Complex Safety students of master level. Genuine interest in computer games on the part of students kept them motivated while doing preparatory linguistic exercises including matching, gap filling and multiple choice, with high and low frequency words. The enhancement of student linguistic competence was evident in the results of the final term test.

Generally, open internet resources increase the sustainability and diversity of teaching English as a foreign language, but further research is needed.

Keywords: open internet resource; ESP course; international vocabulary; podcasts; simulation strategy computer games

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1. Introduction

The quantity and quality of potential language learning opportunities and resources available on the World Wide Web is simply enormous. Appreciating a great job done by Gr. Davies (ict4lt.org), J.P. Locky (call4all.us), T. Cobb and other leading CALL researchers and organizations (e.g. the British Council) on collecting, categorizing and sharing information about internet resources for language learners and teachers, we have to
admit that one usually can not rely completely on them while tailoring an ESP course for a particular group of learners.

This paper describes our experience in integrating open internet resources into an ESP course for Complex Safety master level students, namely podcasts and simulation strategy computer games, providing a discussion platform for professional issues. The subjects are fifth year Complex Safety students at St. Petersburg Polytechnical University in Russia of roughly low intermediate level of English. The main textbook Disasters and Man (Vorobiev et al., 1998), a collection of serious professional texts on different emergency and safety issues, needs supplementing with adequate audio-material and modern language teaching tasks that increase student motivation. So, we made listening to podcasts related to technological advances and disasters from the site http://breakingnewsenglish.com/ compulsory in this ESP course and introduced preparation stage, playing simulation strategy computer game Stop disasters! (stopdisastersgame.org) and discussing the results as an experimental element of the course.

2. International vocabulary pronunciation mistakes: diagnosis and correction

The language focus here is the so-called international vocabulary—mainly words of Greek and Latin origin, which are known to be difficult to pronounce correctly because of the interference with our mother tongue. We noticed that speaking to each other while reporting the content of the news programs or the results of performing exercises accompanying the audio-material from the website, students often make mistakes in familiar words of Greek and Latin origin. The diagnostic test including a list of 10 words / word collocations selected from the podcasts used by students, which they had to read aloud, tête-à-tête, with the teacher fixing the pronunciation mistakes, showed that only 30% of words, on average, were pronounced correctly. The remedy to the situation was seen in the following steps: creating a bank of international vocabulary including names of the typical disasters based on the text of 26 podcasts. The vocabulary items were selected using morpheme and element search functions of concordancer class karTatekA program (Kogan, 2012). Totally, we selected 56 words and word collocations. Then all of them were selected from the corresponding audio files using speech segmentation Praat program, which is freely available at Praat developers’ website. The created resource was made available to students through specially designed mini-course in VLE Moodle (available at http://moodle.lingua.spbstu.ru/course/view.php). However, to take advantage of this resource, students had to download and set up Praat on their PCs, as the program is not compatible with the Moodle platform. Those who did this found the resource very useful because it helps to pay attention to the pronunciation of not only single words but word collocations as well, which is not provided by well-known on-line dictionaries. The compulsory part of the homework with podcasts required weekly uploading of the sound files created by students using the standard Windows recording application into the Moodle course. The files were to contain the recorded synonym match task for a selected podcast from the Breakingnewsenglish collection. This algorithm allowed the teacher to provide the quick and efficient feedback for words pronounced incorrectly. Due to the efforts aiming at improving the pronunciation of international vocabulary words, by the end of the course more than 70% of international words from the 15 word item list were pronounced correctly in a final test similar to the diagnostic one, on the average, with the best students saying about 90% of test words correctly.

3. The integration of simulation strategy computer games in ESP course: the recommended procedure

The introduction of simulation strategy computer game Stop disasters! into an ESP English course at University level could be regarded as innovative because none of the papers considering the educational potential of computer/video games (Gee, 2009, Prensky, 2001, Hayes, 2004, Glazer, 2006) addresses this problem directly. The works focused on “language aims” of computer games (Mawer & Stanley, 2011, Beavis 2004, Turgut & Irgin, 2009, Zheng et al. 2009) deal with a different age group and game types. Meanwhile the key point of all these papers is that the traditional educational process would benefit greatly if it borrowed the underlying principles of the best computer games. Taking into account the genuine interest in computer games on the part of modern students, which was proved by surveying 110 of one to six year students from different departments of SPbSPU, we decided to risk using the simulation strategy computer game Stop disasters! as a vehicle for vocabulary building and consolidation in fifth year Safety students. The analysis of the vocabulary used in the game pop-up tips during the gameplay showed that 75% of words belong to the first thousand of the most frequent English words according to the BNC. The distribution of the rest of the words for Flood disaster is given in Table 1. The analysis was done using tools from VocabProfile section of T.Cobb website (http://www.textutor.ca/vp/).
Table 1: Frequency band distribution of Stop flood game vocabulary

<table>
<thead>
<tr>
<th></th>
<th>K2 Words</th>
<th>K3 Words</th>
<th>K4 Words</th>
<th>K5 Words</th>
<th>K6 Words</th>
<th>K8 Words</th>
<th>K11 Words</th>
<th>K14 Words</th>
<th>K16 Words</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11.7%</td>
<td>7.8%</td>
<td>2.9%</td>
<td>2.6%</td>
<td>0.5%</td>
<td>0.25%</td>
<td>0.5%</td>
<td>0.5%</td>
<td>0.25%</td>
</tr>
</tbody>
</table>

Despite being very scanty, the low frequency words (infrastructures, reservoirs, disruptive, plains, wetlands, dikes, floodwaters, mudslides, backflow), together with the second and third thousand frequency band, are difficult for guesswork and very important for making fast decisions under time pressure during the game.

Special exercises including matching, gap-filling and multiple choice were worked out for these bands with the use of the game-oriented situations, instructions and mission reports and were fulfilled regularly in class, taking up to 10 minutes at 10 lessons of the term before the final game. The preparation stage culminated with the lesson devoted to the game playing in the computer class and a fruitful discussion that followed at the next lesson. Every student prepared a detailed report on the disaster he or she tried to stop. They did not evaluate the game overall highly, because its graphics, gameplay, sound and control seem primitive in comparison with the most popular video games, but stressed that it was useful in terms of vocabulary and some specialist knowledge revision. So, they recommended we should adopt it as a component of the ESP course. The enhancement of their linguistic competence was evident in the results of the final term test, which included all the core vocabulary of the game in the versions of fire, flood and hurricane disasters.

4. Conclusions

Despite the limited scope of our research we can conclude that integrating open internet resources into a course of English leads to the increase in learners’ autonomy and motivation, allows upgrading the course which is based on the conventional textbooks but requires a serious preparation on the teacher’s part. The introduction of simulation strategy computer games in ESP English courses is worth further investigation and application in wider contexts, e.g. as an element in General English courses while dealing with the relevant topics. Finally, the open internet resources increase the sustainability and diversity of teaching and research methods.

5. Acknowledgements

The authors would like to thank Natalia Korovina, a graduate from Department of Linguistics and Cross-Cultural Communication at St Petersburg State Polytechnical University, for contribution to the part of this research based on the use of Praat program.

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How does technology contribute to L2 learners’ look-ups?

Toshiko Koyama
Osaka Ohtani University
Osaka, Japan

Abstract

This paper introduces some findings based on the study concerning electronic dictionary (hereafter E-dictionary) strategy training, whose aim was to look for ways of maximizing the efficiency of this high-tech mobile tool. This is because E-dictionary does not guarantee the same degree of retention of the looked-up words nor comprehension of the text as a printed dictionary (hereafter P-dictionary) does, although it can enhance learners’ look-up frequency (e.g., Koyama & Takeuchi, 2007). The study was conducted with 17 university students in a reading class over 12 weeks. They were first given an explicit presentation of a set of dictionary strategies by a teacher. Then, each participant explained the contents of the textbook while using their E-dictionary on a voluntary basis. A quiz consisting of several questions was distributed to check their reading comprehension. The results of pre- and post-questionnaires indicated that their look-up behavior has positively changed after the training. Their reference skills have improved as well.

Keywords: E-dictionary; P-dictionary; dictionary strategy training; reference skills

1. Introduction

While digitized dictionaries such as those on CD-ROM and the web have become widespread over the past few decades (e.g., Knight, 1994; Laufer, 2000), a new type of electronic dictionary appeared at the beginning of this century. The electronic dictionary (hereafter E-dictionary) is a small handheld computer with integrated reference materials, and has been rapidly replacing traditional printed dictionaries (hereafter P-dictionary) in Asian countries. The E-dictionary has a deep-rooted popularity among Japanese “digital natives” (Prensky, 2001).

Koyama & Takeuchi (2007) investigated the differences in learners’ look-ups, effect on learning, and impressions or comments on comparisons between the E-dictionary and P-dictionary. This comparative research was necessary, because the E-dictionary only provides learners with fragmentary information about the target words due to the limitations of the screen display. This is in contrast with a traditional P-dictionary that can offer ample information “on the same page”.

The results show that although the E-dictionary can enhance learners’ look-up frequency, it does not guarantee the same degree of retention of the looked-up words nor comprehension of the text as a P-dictionary does.
The purpose in the present study was to examine how well E-dictionary strategy is retained by L2 learners after a ten-week training in an L2 reading class, with the aim of making good use of the E-dictionary as an effective educational support tool.

2. Method

2.1. Participants and dictionary used

The participants in the study were 15 undergraduate students. According to the results of a 45-item cloze test given to them in advance, their English proficiency level was considered to be low-intermediate or intermediate. No one had had experience of E-dictionary reference skills and strategies training at that point in time. They used their own E-dictionary, which they used for their daily English study.

2.2. Procedure

Training was conducted in their English reading class. Before reading essays in class, a vocabulary check sheet as an outside task was distributed to the participants. To perform the assigned task, they had to look up words and phrases unfamiliar to them in each essay and jot down the most appropriate L2 equivalents of them or example sentences of the targeted words beforehand. Every time they finished reading an essay in the textbook, an English test including a reading comprehension and vocabulary quiz was administered. The participants were not allowed to consult an E-dictionary but could look at the vocabulary check sheet while answering the quiz.

At the beginning of the training session, the participants were explicitly taught four E-dictionary strategies by an instructor: (1) guessing meanings from the context before actually look-ups; (2) associating dictionary information with their background knowledge; (3) checking usage examples of the target words; (4) paying attention to pronunciation of the target words and pronouncing it.

Before and after the training, the participants were given pre- and post-tests consisting of a reading text and a comprehension quiz, and required to read and answer it while using an E-dictionary. To assess which reference skills and dictionary strategies they actually used, a 17-item questionnaire was also administered. Additionally, after the participants answered the questionnaire, they could feel free to make any comments on their look-up behavior or the training they received.

3. Results

Table 1 represents a comparison of the mean values between pre- and post-tests. “Vocabulary Quiz” and “Comprehension Quiz” in the table indicates percentage of correct answers.

A 17-item questionnaire was administered to assess their retention of E-dictionary reference skills and strategies they were instructed. The participants checked off each item in the questionnaire if they actually applied them during both tests. One point was given to each checked item as well. The value revealed significant difference between pre- and post-tests at the .05 level. Concerning E-dictionary strategies they were specifically taught, the number they checked significantly increased as well (see Table 2).

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabulary Quiz</td>
<td>50.0%</td>
<td>71.1%</td>
</tr>
<tr>
<td>Comprehension Quiz</td>
<td>78.0%</td>
<td>67.7%</td>
</tr>
</tbody>
</table>

*p < .05
Table 2: Result of 17-item questionnaire

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of the items (17)</td>
<td>6.3</td>
<td>8.5*</td>
</tr>
<tr>
<td>Number of the targeted items (4)</td>
<td>7.3</td>
<td>9.3*</td>
</tr>
</tbody>
</table>

*p < .05

In addition to the questionnaire, some comments from the participants were: “I used to check the first meaning of the target word on the screen of my E-dictionary. But now I look over the other meanings and check whether an idiom exists or not,” “Recently, I pay more attention to pronunciation of the target words.”

4. Discussion and conclusions

The results show the following. Although the test scores in Table 1 indicate that their reading comprehension did not sufficiently improve, the reference skills and the strategies the participants were specifically taught appear to have been retained after the nine-week dictionary training. Excerpts from their comments provide abundant proof that they could consciously consult the dictionary.

One possible explanation for the finding above is that the dictionary strategy instruction was conducted explicitly. What is more, the assigned task seemed to support the retention of a complicated cognitive process which dictionary consultation requires (e.g., Tono, 2001). The findings of the present study are in strict accordance with the findings in Fraser (1999) and Nyikos and Fan (2007). These considerations, therefore, would lead us to believe that effective use of E-dictionary provides L2 learners with scaffolding (van Lier, 1996).

5. Acknowledgements

This research is partially supported by the Grant-in-Aid for Scientific Research (C) No. 23520724, awarded to the author of this article in the fiscal years from 2011 to 2013. The author would like to express her deep gratitude to Professor Thomas Robb of Kyoto Sangyo University for his valuable comments on earlier version of this article.

6. References


A study of college EFL learners’ continued use of and the perceptual changes toward mobile-assisted language learning

Yeonhee Kwon
Chung-Ang University
Seoul, Korea

Abstract

The smartphone, a kind of portable mini-computer, is becoming pervasive in our daily lives. New technologies such as social networking, podcasting, and speech recognition embedded in mobile devices have accelerated changes in mobile-assisted language learning (MALL). This study investigates five college EFL learners’ interactions with the smartphone applications and the perceptual change they undergo toward MALL. The participants independently determined which smartphone applications to acquire and how to utilize the language learning contents provided. Their process of mobile-assisted language learning was highly informal, personalized and unsupervised. The results suggest that (1) MALL allows highly informal and incidental learning in unsupervised contexts, (2) MALL is appropriate for pre-intermediate as well as more advanced learners with its variety of choices of language learning contents, and (3) MALL motivates language learners to pursue individual learning with smartphone applications.

Keywords: mobile-assisted language learning; smartphone applications; learner perception; informal and personalized learning

1. Introduction

The popularity of mobile devices has changed the way we learn, communicate, and live. First coined by Chinnery (2006), mobile-assisted language learning (MALL) extends learning opportunities and reshapes learning styles. A number of studies assert the accessibility, convenience and interactivity of MALL. Alongside this trend toward mobile-based learning, the usefulness of MALL should be considered from learners’ perspectives: ‘Do learners have any difficulties using smartphone applications for individual language learning?’ and ‘How does mobile technology effectively facilitate longitudinality in their learning by fostering continued utilization of the smartphone applications?’ Despite these important questions, not many studies have presented any empirical analysis of learners’ perceptions of MALL using applications.

The purpose of this study is to investigate how college EFL learners’ perceptions toward MALL change over five months, as a follow-up study to Kwon (2013). The research questions are as follows: (1) How did the five EFL learners interact with the smartphone applications? (2) How did the five learners’ perceptions of MALL change over the five months?
2. The previous study: Kwon (2013)

Kwon (2013) investigated college EFL learners’ individual MALL process with smartphone applications over 10 weeks. The participants were given a list of smartphone applications for learning English, selected which ones they were to use in their own language learning, and submitted weekly study logs through KakaoTalk™, a free mobile messenger application for smartphones. The study found that the participants generally had positive perceptions of MALL, highly preferred MALL as a way to practice receptive skills, and routinized MALL in their daily lives.

3. Method

The participants in this research were five college EFL learners who were still conducting informal unsupervised MALL with smartphone applications for five months after the end of Kwon (2013). The researcher contacted all the participants in that study and eventually found five students still using the applications for their own learning. To achieve an in-depth understanding of their interaction with and perceptions of MALL, the researcher conducted an open-ended survey and follow-up individual interview. The interviews were conducted in Korean, recorded on-site, saved as audio files, and transcribed for analysis. Table 1 describes the participants’ information in detail.

<table>
<thead>
<tr>
<th>Age</th>
<th>Gender</th>
<th>Major</th>
<th>TOEIC score</th>
<th>Intention to continue use of MALL in Kwon (2013)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>24/ M</td>
<td>EEE</td>
<td>465</td>
<td>I do not want to continue MALL in the future. I mean, I would not particularly find cause to use it. I may just have a look at it when I am bored. (1/5)³</td>
</tr>
<tr>
<td>B</td>
<td>19/F</td>
<td>EE</td>
<td>920</td>
<td>I want to continue to use it to listen to British English and read e-books. (3/5)</td>
</tr>
<tr>
<td>C</td>
<td>20/F</td>
<td>EE</td>
<td>840</td>
<td>I might not use it as vigorously as I did during the MALL period, however, I want to use it anyway because I think it is effective in studying English. (4 / 5)</td>
</tr>
<tr>
<td>D</td>
<td>23/F</td>
<td>N</td>
<td>880</td>
<td>I will keep using the smartphone applications for my own purposes. I think I have managed my spare time more efficiently and effectively since I joined this MALL project. (5 / 5)</td>
</tr>
<tr>
<td>E</td>
<td>23/F</td>
<td>N</td>
<td>920</td>
<td>I love to study English with smartphone applications. I just want them to be upgraded more, so there will be no reason to visit off-line institutions to study English. (5 / 5)</td>
</tr>
</tbody>
</table>

Note: EEE = Electrical and Electronics Engineering, EE = English Education, N = Nursing

4. Discussion

4.1. Research Question 1: How did the five EFL learners interact with the smartphone applications?

Godwin-Jones (2011) describes smartphones as personal devices “ideal for individualized informal learning” (p. 8). The current participants utilize smartphone applications for individual learning, each under a different, individual process is different from each other. Participant A utilized a single application only, and only during commuting hours. His low interest and motivation in learning English keep him demotivated from studying English in general, however, he persists in trying to use the application. Participants C and D had experienced

³ The number indicates their answer to a survey question in Kwon (2013) regarding their perception of MALL. The question was *I am going to utilize the smartphone applications on a regular basis in the future* and the participants were asked to answer on a five-point Likert scale (1: not at all likely 5: very likely)
MALL even before Kwon (2013). They maintained their previous MALL patterns. The MALL learners who remained quite active were participants B, D, and E and they used a diverse range of applications. They are likely to prefer learning contents at the level of i-1, for lowering their L2 learning burden in English.

4.2. Research Question 2: How did the five learners’ perception toward MALL change in five months?

The participants perceived MALL more positively than they had thought in Kwon (2013). This results from their continued use of applications with “little time”. They find that the strengths of MALL lie in its accessibility and ubiquity. In addition, participants A and E mentioned that MALL motivates pre-intermediate language learners to pursue their process of language learning. Participant A mentions that there is an increase in comprehensibility through MALL scaffolding features such as glossing and transcribing words. Participant E has searched for applications for novice Japanese learners and found them quite satisfactory. Participant D is doing the offline collaborative work with the vocabulary application. The participants consider MALL to be essentially a secondary method of studying English and expect incidental learning to occur through its use.

5. Conclusions

This study explored five participants’ efforts at continued use of smartphone applications for MALL in informal and unsupervised contexts. This versatile tool, incorporating most of the features of desktops and laptop computers, presented challenges as well as opportunities to the participants. Marsick and Watkins (2001)’s features of informal and incidental learning are as follows: the learning occurs wherever learners have the need, motivation, and opportunity for learning. From these findings, it is concluded that MALL is a highly informal and incidental learning method that is effective in an unsupervised context.

6. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Learning Slovak in an eLearning environment

Anna Kyppö
University of Jyväskylä
Jyväskylä, Finland

Abstract

This empirical study examines learning Slovak in an eLearning environment. The drive for more up-to-date, pedagogically acceptable computer-assisted teaching programs led to the development of a web-based module of Slovak language and culture. The initial research questions are whether and how Slovak is learnt, and how all language skills can be acquired in such a context. The study also attempts to answer the questions about the teacher’s role in tutoring, evaluating and motivating the learners.

The Slovak eLearning course is based on the socio-constructivist approach. The main focus is on student activities and development of learners’ communicative competences. A key issue in the course is motivation, because an agency-promoting environment is often seen as an essential factor in successful learning. Learners’ degree of motivation and engagement, as well as their conscious approach to learning, are reflected in the development of language proficiency and significant increase of learning awareness.

While receptive skills (listening and reading) were evidently enhanced in the eLearning environment, the productive skills (speaking and writing) did not really develop. The use of diacritics in Slovak revealed the importance of learning awareness, increased through pen-and-paper activities. There is, thus, a dilemma: new technologies allowing for distance language learning and the simultaneous need for more traditional learning activities. This dilemma poses a central challenge for more personalized language learning environments.

Keywords: eLearning; eLearning environment; eLearning skills; language skills

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1. Introduction

1.1. Background

This empirical study explores the learning and teaching of Slovak in the eLearning environment. The University of Jyväskylä, Finland, is the only academic institution of higher education in the Nordic countries that offers an academic programme of Slovak language and culture. The emergence of more up-to-date, pedagogically acceptable computer-assisted teaching programs and the need to reach the distance learners led to the development and implementation of an eLearning course.
The course is based on the socio-constructivist approach. Because social constructivism in learning emphasizes problem-based instruction and peer collaboration between learners, the main focus is on student activities and the development of their communicative (linguistic and pragmatic) competences. One of the motivation-raising factors is the agency-promoting learning environment. The course is built around the metaphor of learning a new language as climbing a mountain. The physical setting of the course is the website of the Slovak Tatra mountain. Ten mountain camps represent the different stages of the course. The proficiency levels and learning outcomes correspond to CEFR levels A1-B1 and to the ECTS outcomes (2009). Learning occurs both in and out of the classroom, with the possibility for asynchronous and synchronous eLearning as well as blended learning.

The study uses Kern and Warschauer’s concept of “Three waves of CALL” (2001) and Johnson’s theory of SLA (2007) as a framework. In Kern and Warschauer’s formulation, the Slovak eLearning course is a typical product of Communicative CALL (focus on learners’ activities and use of target language). However, the shift in the course towards Integrative CALL is clear, because the focus there is primarily on collaborative practices and exploitation of web resources.

According to Johnson’s model of SLA (2007), the origin of second language competence lies in language use that takes place in a real social context (interaction of language competence and performance). The main focus of this model is on learner’s problem-solving cognitive skills and the skills of linking the acquired knowledge to the previously acquired knowledge and skills, which is also an essential principle in constructivism.

1.2 Research questions

Research questions address the learning and teaching of Slovak in an eLearning environment:

1. Can Slovak be learned in an eLearning environment? How do learners learn in such an environment?
2. Can all four language skills be effectively addressed in an eLearning environment?
3. What is the role of the teacher in the technology-enhanced learning environment?

2. Method

2.1. Participants

The teaching experiment was implemented with two groups of students: 22 students of Slovak at the University of Jyväskylä in 2008–2009 and 15 students of Slovak at the University of Helsinki in 2010. The demographics of the groups were as follows. In Jyväskylä 21 students were female, one was male; 20 were Finnish and one was Polish. All of them were language students without any previous knowledge of Slovak. At the University of Helsinki, eight students were male, seven were female; 13 were Finnish, one was French and one Japanese. All of them were students of Slavic languages without any previous knowledge of Slovak. Their e-learning efforts were monitored for a period of one academic year.

2.2 Data collection and analysis

The purpose of long-term monitoring was to obtain the maximum amount of information about the learning process—what and how the learners learned. To capture the whole learning process, students were asked to keep learning journals.

In addition, data was collected through pre-, on- and post-course questionnaires, interviews, content analyses of the learning journals, course feedback and teacher reflections. A pre-course personal questionnaire was used to gather information about the personal and professional background of the students.

Data were interpreted by thematic analysis, a conventional practice in qualitative research used for the interpretation of small-size research topics (Braun & Clarke, 2006). After the collected data was described, the items were divided into themes and their meanings were interpreted. The themes were then grouped as pre-, on- and post-course themes.

To explore how the learners approached their learning, Entwistles’s model of learning approaches (2001), offering three approaches to learning—deep, surface and strategic—was adapted.

3. Discussion
The pre-course themes were related to the learners’ concept of Slovakia and Slovak language, concept of learning with a special focus on the web-based and independent learning, and their expectations of the course as well as their beliefs in themselves as eLearners.

Learner’s expectations for the course were high, belief in one’s own learning skills was strong and Slovak was perceived as a distant and challenging language. The use of a new learning environment was seen as a valuable addition to traditional learning.

The on-course themes were related to the development of eLearning skills and strategies and the raising of language learning awareness. There was a particular focus on the new skills (e.g. time management, motivation and rewarding) as well as on process-oriented learning and some specific language issues (e.g. language contacts, phonological system of Slovak, etc.). Skills for self-assessment, self-reflection, collaboration and research were regarded as highly important (Clarke, 2008).

Awareness of learning plays an important role in the process of learning a new language and serves as an efficient motivator. The use of Slovak diacritics revealed the importance of developing learning awareness. It was pen-and-paper writing, not computer-enhanced practice, that proved to develop not only the learners’ knowledge of diacritics, but also their language learning awareness.

The post-course themes were related to learners’ attitudes towards eLearning, course evaluation (clarity, authenticity, functionality and relevancy) and self-evaluation. The course was considered highly appropriate for synchronous and asynchronous learning. However, blended learning (contact classes and eLearning) was praised.

4. Conclusions

In accordance with Entwistles’s model of learning (2001), the learners of Slovak employed the deep approach to learning, consciously building on their previous experience of language learning. One of the main affordances was the continuous teacher feedback and one of the major constraints was time management.

Based on their reflections, the learners showed progress in their receptive skills (reading and listening), but regressed in their productive skills (speaking and writing). However, the new eLearning skills, such as the research skills, content-creating and collaboration skills, were highly appreciated. Based on the experience of this teaching experiment, blended learning is needed to compensate for the lack of spontaneous speaking and writing.

Students perceived the teacher as a tutor, evaluator, but also as a course designer, developer and motivator.

Current developments and innovations in language learning and teaching emphasize the use of learner-centred pedagogies in new learning environments. The current study offers insight into the acquisition of a small language and thus contributes to the CALL pedagogy of less commonly taught languages.

5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

L2 learning and researching through social media

Marie-Noëlle Lamy
Open University
Milton Keynes, UK

Jonathon Reinhardt
University of Arizona
Tucson, USA

Katerina Zourou
Sør-Trøndelag University College
Trondheim, Norway

Abstract

Social media are applications with a networking dimension, which are designed to make that dimension central to their use. They attract language learners, teachers, language learning providers and researchers for a variety of reasons, although they are a controversial issue in language education as we lack empirical evidence as to whether and how they promote language learning. Mindful of this gap, and of the interconnectedness of CALL teaching, learning, and research, this symposium will address these three aspects of CALL work, focusing on the extent to which social media can be seen to support them. Reinhardt will report on several pedagogical treatments that incorporated social media for the learning of L2 English, Korean, and Italian. Informed by multiliteracies and language awareness frameworks, the projects implemented bridging activities targeted to develop awareness of social media as text and social practice. Zourou will discuss the challenges faced by CALL scholars in their research on informal language learning through social networks. The study addresses the issue of data disclosure and the consequences of data exploitation for research purposes. Lamy will scrutinise social media as research environments in two ways: her paper will critically review research methodologies adopted by CALL researchers for reporting projects on learning and teaching through social media. But she will also address the digital professionalisation of CALL researchers and discuss ways they can use social media to keep abreast of their field.

Keywords: bridging activities, CALL research practices, informal learning, social media

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1. Researching networking for language learners

Marie-Noëlle Lamy

As with many earlier technological innovations, the possible exploitation of social networking sites (SNSs) for learning and teaching languages has seen Messianic responses from the language research community. However, the kind of empirical evidence that is presented in support of integrating SNSs into formal teaching is often limited to data obtained from conventional online projects, for example forum discussions or telecollaborations. In these reports, it can be seen that classroom exchanges take place but ‘networking’ is neither problematised as an activity type, nor is it demonstrably present. Lamy and Zourou (forthcoming) insist that there are differences between instructor-directed activities or interactions online and activities or interactions (instructed or non-instructed) that involve networking. In other words there are differences between interacting (which has been possible in online language classes since the early 1990s) and networking (which is
characterised by what occurs on SNSs and has been possible since the first decade of the 21st century). Their contention is that if participants are meeting on an SNS rather than on a conventional discussion board, then following what has been learnt from task design scholarship in CALL over two decades (Hampel, 2006), they should be engaging with the specific affordances of such sites.

Research methods employed in the literature reporting the conventional projects mentioned above vary widely but are themselves conventional CALL research methods. Pedagogical situations where social networking takes place alongside or outside more traditional online interactions are under-researched. My hypothesis is that this lack derives both from a conceptual confusion about what networking entails and from a paucity of visibility of specific research methods for studying SNSs. In this presentation I will scrutinise social media as research environments. I will do so in two ways, in two separate parts of the talk.

Firstly, my paper will critically review research methodologies adopted by CALL researchers for reporting on online networking for language learning. To frame the inquiry, I will draw on two theoretical frameworks. The first provides criteria for identifying relevant practices in eLiteracy and in online social networking (Lankshear and Knobel, 2008; Musser, O’Reilly & O’Reilly Radar Team, 2006). The second suggests conceptual tools for analysing social learning in informal settings (Fenwick and Tennant, 2004; Schugurensky, 2000, 2007). This first part of my talk will be a meta-study with illustrations from one of my projects, involving empirical data from distance students using forums as well as Facebook groups to support their formal learning of their L2.

Secondly, I will address the perspectives for a digital professionalisation of CALL researchers and discuss methods that could be used to exploit the social media themselves in researchers’ efforts to keep abreast of SNS-based study, as well as the sorts of obstacles they would need to anticipate in pursuit of this aim. This part of the talk will draw from recent editorial experiences in bringing together more than 23 international contributors to produce a collective work on social networking and language education (Lamy and Zourou, forthcoming).

To frame the inquiry, two schemes are used: (1) criteria for identifying SN practices (Lankshear and Knobel, 2008; Musser, O’Reilly & O’Reilly Radar Team, 2006) and (2) tools for analysing social learning in informal settings (Fenwick and Tennant, 2004; Schugurensky, 2000, 2007).

2. Implementing social network-mediated language learning through bridging activities

Jonathon Reinhardt

Social networking sites (SNSs) like Facebook, used by over 800 million individuals around the world in 70 different languages (Facebook, 2012), have in recent years become a ubiquitous and familiar means for technology-mediated social interaction. Recognising this, applied linguists and language educators have started exploring the potential SNSs hold for second and foreign (L2) language teaching and learning (Blattner & Fiori, 2009; 2011; Blattner & Lomicka, 2012; Lamy & Zourou, forthcoming; McBride, 2009; Mills, 2011; Mitchell, 2012; Reinhardt & Ryu, forthcoming; Reinhardt & Zander, 2011; Stevenson & Liu, 2010; Sykes & Holden, 2011; Zourou, 2012). For example, from a post-structural view, SNSs can be seen as Web 2.0 artifacts (Warschauer & Grimes, 2007) that embody socio-literacy practices, in which identities and communities are performed and negotiated in socially recognised ways, by means of shared repertoires (Street, 1995; Gee, 2004; Lankshear & Knobel, 2008; Chen, 2012; Reinhardt & Chen, in press). SNS pages and profiles are both arenas for authentic interaction and, at the same time, socio-pragmatically genuine “encoded texts” (Knobel & Lankshear, 2008) instantiated by these practices. Unique socio-pragmatic conventions and cultures-of-use (Thorne, 2003) emerge in these textualised practices, afforded by various features of SNS technology.

Coherent with the perspective that SNSs are textualised socio-literacy practice, Thorne and Reinhardt’s bridging activities model (2008; Thorne, 2009) offers principled instructional parameters for the development of digital L2 literacies (Reinhardt & Thorne, 2011). Bridging activities seek to develop learner awareness of Internet use as socio-literacy practice by focusing on “vernacular digital language conventions and analysing these conventions to bridge in-class activity with the wider world of mediated language use” (Thorne & Reinhardt, 2008, p. 563). Activities focus on both experiential and analytic learning, since technology-mediated language use is “both the means and the object of awareness” (Reinhardt & Thorne, 2011, p. 15).

The paper reports on three pedagogical treatments that incorporated social media for the learning of L2 English, Korean, and Italian, informed by a bridging activities framework. In the first case, L2 English students analysed
the interactional, generic features of Facebook posts and engaged in group projects to critique social networking games. In the second case, L2 Korean students analysed the interactional, sociopragmatic features of authentic Korean posts and role-played characters interacting through Facebook. In the third case, L2 Italian students interacted as themselves in a Facebook group, posting and commenting on class and personal activities, both in and outside of class. The paper discusses how the three treatments interpreted the concept of bridging activities differently, and how differing curricular constraints, task parameters, levels of integration, instructor involvement, and learner variables impacted learner outcomes. The paper concludes with implications for effective pedagogical integration of social networking in formal learning environments.

3. Investigating networking practice in informal language learning communities

Katerina Zourou

Among studies examining the potential of social media in language learning, the social networking component, for example the capacity for individuals to connect with any user and more importantly to make visible and articulate their social networks (boyd & Ellison, 2007), thus to connect and interact in unrestricted, unpredictable ways, is an under-explored area of investigation. Social networking activity can occur through a non-predefined set of social media, with any user, with no clear definition of learning goals and in an unspecified timeframe. This leads to a variety of user-initiated configurations that challenge existing research frameworks for the understanding of informal language learning through social networks. Therefore, documenting and demonstrating processes and outcomes in informal learning settings requires conceptual and methodological tools to cope with the open, user-initiated social network-rich settings where language learning can occur, in contrast to formal or non-formal instructor-led telecollaborative settings (as developed in the last two decades), with predefined sets of users and artifacts, i.e. circumscribed online activity.

The aim of this paper is to discuss the challenges faced by CALL scholars in their research on informal language learning through social networks. It particularly addresses the issues of i) intellectual property rights (IPR) and the consequences of data exploitation for research purposes, ii) disclosure of personal data of users (language learners) and iii) qualitative and quantitative approaches to data exploitation.

Among types of informal learning (e.g. Schugurensky, 2000), we take as our example web 2.0 language learning communities as settings in which language learning is facilitated by social networking tools, the best known being Babbel, Busuu and Livemocha. Our analysis draws on recent experiences with data collection and analysis in the three communities (Potolia & Zourou, 2013; Zourou & Loiseau, in press).

Learning in these communities is not totally without bounds, and choices in respect of online activity (user roles, provision of materials and tasks, code of conduct, expected user attitudes) and social networking tools have been made by the community administrators. However they can be taken as an example of the situations CALL researchers face in their attempt to understand the social dynamics emerging through informal learning practice in user-initiated social networking spaces. The study finishes by identifying types of copyright-protected data from user online activity not disclosed for research purposes, and ways of coping with this issue in order to offer a more complete picture of networking in informal language learning communities and to inform research frameworks dealing with this topic.
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Enhancing learner autonomy and critical reading by an on-line course incorporating Professional English reading

Mei-Hua Lan
Wenzao Ursuline College of Languages
Kaohsiung, Taiwan

Kai-Ping Wang
Shu-Zen Junior College of Medicine and Management
Kaohsiung, Taiwan

Abstract
An experimental on-line course website was developed as a supplementary tool to encourage students’ additional readings after class and evoke students’ critical thinking by posting reading reflections and conducting on-line discussions after reading. Totally 54 college students of medical majors, aged 17-19, with elementary English proficiency, were involved in this experimental course for a semester. The course website incorporated several topics of guided readings related to students’ majors or professions, some topic relevant grammatical expressions or exercises, and extensive learning activities after watching the topic relevant movies. Discussion sessions were also offered in class to check students’ reading comprehension and help solve students’ reading or language problems. At the end of the semester, students were asked to conduct their English Reading Portfolios in groups, and to evaluate or reflect on their learning achievements. A feedback questionnaire was also designed and distributed, and the effectiveness of the course was analysed from three aspects, including the effects of English Reading Portfolios, on-line course design and group interactions. The results confirmed the positive effects of English Reading Portfolios on enhancing students’ motivation for English learning, their learning of English, and preparations for future careers or other important skills. Furthermore, the feedback questionnaire results indicated that the course contents, worksheets, hand-outs, multimedia devices and digital course content were designed and used properly. Finally, the results of the study showed that group cooperation and learning had positive effects on English learning, learning autonomy as well as development of students’ responsibilities and critical thinking. The findings of this study are expected to provide some pedagogical insights for future studies and course designs, and to inspire more teachers to involve in development of better English curricula.

Keywords: Computer-assisted Language Learning (CALL); English for Special Purposes (ESP); Learner Autonomy; English learning portfolios; EFL blended course design

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1. Introduction
To respond to particular needs of ESP, the study tried to incorporate medical ethical readings into college English learning, and to design an on-line experimental course employing Professional English reading portfolios. The main purposes of the course are to relate students’ English learning to their professional

backgrounds, and to make English learning meaningful for students of medical majors by designing an online ESP experimental course.

Based on the notions of blended learning proposed by Grguovic (2011), Garnham et al. (2002) and Thorne (2003) that suggest incorporating online extensive learning and discussions with face-to-face teaching and learning to supplement learning, this study employs blended learning in the College English class by integrating several on-line learning materials and in-class discussions, and tries to guide students to read about and discuss critical ethical issues in their professional fields. Learning activities in this experimental course includes English ethical readings, guided discussions about the issues illustrated in movies (ER), instructions of some useful English expressions related to the medical professions and a guest speech by an experienced personnel in the medical field. A variety of group-work and in-class or on-line discussions were designed to train students’ abilities of critical thinking and problem-solving that are important for medical majors’ future careers. The findings of this study are expected to provide some pedagogical insights for future studies and course designs, and to inspire more teachers to involve in development of better college English curricula.

The study hopes to answer the following questions:

1. What are subjects’ responses to the Ethical Reading Portfolio Project?
2. What are subjects’ responses to the online course design and supplementary learning materials?
3. What is subjects’ feedback to the guest speech and collaborative language learning?
4. In what ways do the online additional readings help subjects develop critical thinking?

2. Method

In total, 54 subjects with medical majors were involved in this study. The participants, aged 17 to 19, had learnt English for at least six years. Most subjects’ language proficiency is elementary to pre-intermediate level. Teaching materials include four ethical readings that were adapted from the book Chicken Soup for the Nurse’s Soul—More Stories to Honor and Inspire Nurses. For different topics, worksheets with before-reading, while-reading, after-reading guided questions and activities as well as vocabulary assistance and exercises were designed to enhance reading comprehension and vocabulary learning. In addition to reading materials, handouts and worksheets with grammatical lessons and exercises were provided online as supplementary English learning materials and references. Teaching and supplementary materials are accessible in the course website for learners’ independent learning and practice. The study was implemented for 16 weeks, with totally 32 instruction hours. After class instructions, reading about each topic, watching topic relevant movie episodes and the guest speech, the subjects were required to conduct on-line discussions regarding some ethical issues and to provide their reflections online. At the end of the course, the subjects compiled a group portfolio to collect their learning results, and took the Course Feedback Questionnaires which include five parts with 50 Likert-scale items that elicit students’ feedback to the portfolio project, course design, collaborative learning and guest speech. Descriptive statistics were employed to analyze the questionnaire results.

3. Discussion

According to the descriptive statistic analyses of Course Feedback Questionnaire (Appendix I), positive responses to the portfolio project, online experimental curse design, guest speech and collaborative learning were provided by the majority of subjects. Specifically, most subjects liked the online Ethical Reading Portfolio Project and thought the project enhanced their development of both English language skills and professional English language knowledge and skills that are beneficial for their preparations for their internships and future careers. Also, most subjects indicated that the online portfolios provided them with a sense of achievement, made them less stressed, could show their learning results better, and helped them understand their progresses better. The study results are consistent with the previous research findings (e.g. Chang & Chang, 2003; Chen, 2005; Hsieh, Lu & Yeh, 2003) that suggest benefits of portfolios in language development, in better understanding of students’ progresses, and in motivating students’ learning by providing a sense of achievements.

Similarly, positive feedback on the course design, collaborative learning and guest speech was provided. About half of the subjects indicated that the materials were appropriate for their English proficiency level, and the course designs met their needs and interests. Moreover, the majority of subjects agreed that the worksheets were practical and helpful for their English learning. Most subjects also indicated that the lecture and requirements of assignments were clear and comprehensible, and the uses of technical assistance and digital
contents were appropriate. Likewise, most subjects provided positive responses to collaborative learning that enhanced language, interpersonal skills learning as well as independent learning, or learning autonomy and critical thinking. The study findings confirm the benefits of collaborative learning as suggested by Chiang (2002). In addition, most subjects indicated that the guest speech was inspiring in providing information about future careers and significance of ethics in their professional fields. As suggested by the previous studies (e.g. Berkowitz & Hoppe, 2009; Kim, 2000; Agboola & Tsai, 2012), learners should be provided opportunities for actively reflecting on the readings and learning to relate what they read to their own lives, to nurture the appropriate values and ethics that are extremely significant in medical fields. In short, most subjects responded positively to the course designs, collaborative learning and guest speech of the experimental course.

4. Conclusions

In conclusion, the study findings suggest that the ethical-reading-based online course enhances students’ interests in English learning and various skills for future career preparations. Furthermore, student feedback indicates that the course design, handouts, worksheets, uses of technical supports and digital contents in this experimental course were appropriate, and responsive to students’ needs. In addition, the study findings show that the collaborative learning in the online blended course had positive impacts on students’ English learning, active and responsible learning as well as critical thinking. The findings of this study can provide some pedagogical insights for future studies and course designs.

5. References


## Appendix I: Descriptive Analyses of Course Feedback Questionnaires

<table>
<thead>
<tr>
<th>Items</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Feedback to Online Ethical Reading Portfolio Project</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I like the Ethical Reading Portfolio Project.</td>
<td>34</td>
<td>32</td>
<td>27</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>2. The Ethical Reading Portfolio Project helped me improve my English.</td>
<td>26</td>
<td>40</td>
<td>30</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>3. The Ethical Reading Portfolio Project makes me like English better.</td>
<td>28</td>
<td>26</td>
<td>42</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>4. The Ethical Reading Portfolio Project helped me learn more vocabulary.</td>
<td>42</td>
<td>42</td>
<td>13</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>5. The Ethical Reading Portfolio Project helped me learn more grammar.</td>
<td>43</td>
<td>26</td>
<td>21</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>6. The Ethical Reading Portfolio Project helped me learn more English expressions related to the medical and nursing field.</td>
<td>30</td>
<td>38</td>
<td>26</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>7. The Ethical Reading Portfolio Project is helpful for the development and learning of professional knowledge.</td>
<td>49</td>
<td>38</td>
<td>13</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8. The Ethical Reading Portfolio Project is beneficial for my internship in the future.</td>
<td>45</td>
<td>30</td>
<td>19</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>9. The Ethical Reading Portfolio Project is helpful for my future career.</td>
<td>32</td>
<td>42</td>
<td>21</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>10. The Ethical Reading Portfolio Project helped me be more creative.</td>
<td>28</td>
<td>36</td>
<td>30</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>11. The Ethical Reading Portfolio Project equipped me with problem-solving skills</td>
<td>30</td>
<td>25</td>
<td>40</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>12. The Ethical Reading Portfolio Project equipped me with team-work skills</td>
<td>49</td>
<td>28</td>
<td>23</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>13. The Ethical Reading Portfolio Project equipped me with negotiation skills</td>
<td>42</td>
<td>30</td>
<td>25</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>14. The Ethical Reading Portfolio Project provided me with a sense of achievements.</td>
<td>26</td>
<td>30</td>
<td>40</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>15. Comparing to the traditional assessments (exams), the Ethical Reading Portfolio Project made me less stressful.</td>
<td>47</td>
<td>21</td>
<td>21</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>16. The Ethical Reading Portfolio Project could show my learning results better than the traditional assessments (exams.)</td>
<td>32</td>
<td>34</td>
<td>23</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>17. The Ethical Reading Portfolio Project helped me understand my learning progresses better.</td>
<td>28</td>
<td>36</td>
<td>28</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>18. I think the Ethical Reading Portfolio Project was a waste of time.</td>
<td>4</td>
<td>6</td>
<td>21</td>
<td>26</td>
<td>43</td>
</tr>
<tr>
<td>19. The Ethical Reading Portfolio Project made me very frustrated.</td>
<td>8</td>
<td>13</td>
<td>40</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td>20. I think the course design of Ethical Reading Portfolio Project met my needs.</td>
<td>11</td>
<td>34</td>
<td>47</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td><strong>Feedback to Course Design</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. The materials are appropriate for my English proficiency level.</td>
<td>20</td>
<td>26</td>
<td>42</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>22. The course contents met my needs.</td>
<td>21</td>
<td>34</td>
<td>36</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>23. The course contents were consistent with my interests.</td>
<td>21</td>
<td>34</td>
<td>30</td>
<td>13</td>
<td>0</td>
</tr>
</tbody>
</table>
24. The lectures were clear and comprehensible. & 30 & 36 & 26 & 8 & 0 \\
25. The worksheets were practical. & 25 & 42 & 28 & 6 & 0 \\
26. The worksheets were beneficial for my learning. & 34 & 32 & 28 & 4 & 2 \\
27. The requirements of assignments were clear and comprehensible. & 38 & 28 & 26 & 8 & 0 \\
28. The use of technical assistance was appropriate. & 28 & 38 & 34 & 2 & 0 \\
29. The learning materials are so many that it is problematic for me to handle all of them. & 4 & 11 & 30 & 26 & 28 \\
30. The use of digital contents was appropriate. & 25 & 36 & 40 & 0 & 0 \\

**Feedback to Collaborative Learning**

31. I like the collaborative learning in groups & 42 & 34 & 23 & 2 & 0 \\
32. Collaborative learning in groups was helpful for my English learning. & 30 & 42 & 23 & 4 & 2 \\
33. Collaborative learning in groups facilitated my active and independent learning. & 38 & 30 & 26 & 4 & 0 \\
34. Collaborative learning in groups trained me to be responsible. & 45 & 30 & 19 & 2 & 2 \\
35. I had great interactions with my group members. & 59 & 25 & 17 & 0 & 0 \\
36. I think collaborative learning in groups was ineffective, but a waste of time. & 2 & 4 & 17 & 30 & 47 \\
37. I think the assessments for collaborative learning in groups were not fair. & 4 & 4 & 15 & 30 & 47 \\
38. I think the self-assessments of collaborative learning achievements were helpful for my English learning. & 21 & 49 & 26 & 4 & 0 \\
39. I think the peer-assessments of collaborative learning achievements were helpful for my English learning. & 28 & 47 & 21 & 4 & 0 \\
40. I think the self-assessments and peer-assessments helped me develop critical thinking abilities. & 38 & 30 & 26 & 4 & 2
Feedback to Guest Speech

1. Generally, I was satisfied with the speech by the guest speaker. 33 42 21 4 0
2. Generally, I was satisfied with the guest speaker. 44 38 17 2 0
3. Generally, I was satisfied with the time arrangement of the speech. 33 44 21 2 0
4. Generally, I was satisfied with the location arrangement of the speech. 40 38 13 10 0
5. The speech helped me know better about the significances of ethics in my profession. 38 46 15 0 2
6. The speech was very inspiring to me. 35 40 21 4 0
7. The speech was very helpful for my future career. 44 31 21 2 2
8. The speech was very practical. 44 23 29 4 0
9. I’m confident to be able to apply what I learnt from the speech to my daily life and future career. 38 33 25 4 0
10. I think the speech was useless, but a waste of time. 0 2 2 33 63

N=54; 5=Agree a lot; 4=Agree; 3=Neutral opinions; 2=Disagree; 1=Disagree a lot
Global perspectives on Computer-Assisted Language Learning  

Glasgow, 10-13 July 2013

A pedagogical model to support collaborative online intercultural language learning environments

Geoff Lawrence  
York University  
Toronto, Canada

Abstract

Given the emerging focus on the intercultural dimension in language teaching and learning, language educators have been exploring the use of information and communications technology (ICT)-mediated language learning environments to link learners in intercultural language learning communities around the globe. Despite the promise of ICT-mediated learning, research has identified a number of challenges, including inadequate pedagogy, that limit intercultural and language learning in these online intercultural collaborations. This paper will review these challenges and will outline a three-part pedagogical model to guide the integration of online intercultural collaboration into classroom language teaching. This emerging framework is developed around the need to engage learners in the planning of these collaborations, to build identity investment and community in these projects and to actively work with intercultural content to deepen intercultural language learning processes.

Keywords: intercultural online language learning; telecollaborative exchange; intercultural language teaching; online intercultural pedagogy; pedagogical framework

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1. Introduction

Today’s continually emerging technologies provide rich intercultural language learning opportunities for learners around the world. Information and communication technologies (ICTs) offer language teachers a wealth of tools to build interactive, learner-centred environments that develop intercultural communicative competence: the intercultural awareness, interpreting and relating strategies being called for in today’s language learning programs (Byram, 1997). Web 2.0 technologies can promote intense collaboration with peer language learners, enhanced autonomy and opportunities to negotiate linguistic and intercultural understanding. Telecollaborative exchanges, where groups of learners work with others across time and space, offer students the ability to develop meaningful learning relationships with ‘dissimilar others’.

Despite this promise however, research suggests that online collaboration and telecollaborative exchanges can often reinforce, rather than bridge, feelings of difference (Kern, 2000; Potts 2005; Ware, 2005). In a telecollaborative wiki-writing pilot project with English language learners in Dubai and Canada, my colleagues
and I found that learners sometimes made incorrect, highly problematic cultural assumptions of their overseas partners (Lawrence et al. 2009).

Online collaborative communication is bound within a culturally and contextually framed communicative purpose, expectations of social relations and expression of individual identity (Kramsch & Thorne, 2002; Lawrence et al. 2009). Culturally informed interactional differences such as speech acts, stylistic approaches and discursive patterns can be misinterpreted by collaborating partners (O'Dowd & Ritter, 2006). Unless new ‘norms’ of communication and expectations are negotiated and intercultural competence is developed, collaborating partners are likely to project their norms on others and judge accordingly. There is a need for online-centred pedagogical design to bridge interactional differences (Potts, 2005).

Below, I will outline a pedagogical model to build investment and intercultural learning in collaborative online environments. I will argue that blended (or hybrid) environments, where learners work online and in face-to-face classroom interactions, provide an ideal environment to work with the intercultural dimension in online language learning. A summary of strategies to work with this model will conclude the paper.

2. Pedagogical model

Surprisingly little research has looked at the relationship between failed exchanges, methodology and the ways students are prepared for online collaboration (O'Dowd & Ritter, 2006; Potts, 2005). This emerging pedagogical framework (Figure 1 below) is informed by the need to develop identity investment, online community and intercultural competence. The model consists of three stages: the collaborative planning stage, and building identity investment, while actively working with the intercultural dimension in collaborative online language learning environments.

![Pedagogical model](image)

**Figure 1: Pedagogical model for intercultural learning in online language learning environments.**

2.1 Collaborative planning & preparation

A key part of building investment in online/blended intercultural language learning is to ensure that learners play a role in the planning for collaboration. Learners are often left out of this stage that can reduce overall investment in learning. O'Dowd and Ritter (2006) report the need for a “pre-exchange” briefing to orient learners to each other and explore different norms around online communication. Teachers and students can negotiate the type of collaboration, the location of the partner class(es), the intercultural/linguistic focus, and the ICT tools used, particularly in this day of continually emerging technology (where learners may have more ICT familiarity than teachers). The unique nature of online interaction and netiquette guidelines can be discussed in these initial discussions.
This pre-exchange period is also an ideal time to prepare learners to work with intercultural interaction. Bennett (2009) stresses the importance of actively using *culture general* approaches to help learners see culturally informed behavior in their own interactions and those of others. Bennett encourages the use of intercultural “innoculations”, debriefing definitions of culture, culture’s complexity and its impact on language use and perceptions. Adopting an emic approach to culture learning, where learners focus on the “me” in culture before exploring the “other”, can give learners a framework to help suspend judgment and understand intercultural communication.

### 2.1.1 Building identity investment

A second area that appears crucial in online intercultural language learning is the need to build identity investment in the online community. Dörnyei (2007) states that the most salient feature of a “motivating” classroom environment is “the quality of the relationships between the class members” (Dörnyei, 2007, p.720). Group cohesiveness is the “we” feeling of a group – the “gelling force that keeps the group together” (Dörnyei, 2007, p.721). To develop such cohesiveness, proximity, contact and interaction through group work are crucial in connecting learners. Dörnyei stresses the need to negotiate group communication “norms” early in the group’s life to build connections and bridge individual differences.

In online intercultural language learning, actively working with learner identity and cultural experiences can play a key role in building identity investment and intercultural awareness (Dörnyei, 2007; Norton, 2006). In the Dubai-Canada study, we noticed the immense energy learners placed on “positioning” their identity in the online wiki space so they would capture their partner’s interest. A strategic mix of icebreaking activities, synchronous and asynchronous tools can be used in this “getting to know you” stage of the collaboration, giving learners a “human feel” for each other.

#### 2.1.1.1 Active intercultural work

The third area in this model is the need to maximize intercultural learning opportunities. Educators need to proactively work with intercultural content and “rich points” to deepen intercultural learning. Rich points (Agar, 2006) can include intercultural miscommunication, different perspectives, communication styles or beliefs that often result in a judgment or negative perception. A blended asynchronous-synchronous delivery approach is helpful here as learners can reflect on interactions and negotiate an understanding of controversial topics in face-to-face or synchronous discussions. Throughout the collaboration, the role of educators is crucial. Teachers need to actively monitor interactions, check in with learners, revisit culture general learning principles and encourage rich point sharing in a non-threatening manner that can be used for intercultural learning.

### 3. Conclusions

I have listed below some strategies to build intercultural communicative competence in online/blended language learning environments. Focusing on the intercultural dimension in these environments can build 21st century communication skills with a humanistic focus to language learning.

1. Involve learners early in the planning of the project, building buy-in and promoting investment in the collaboration.
2. Exploit synchronous and asynchronous tools to provide multiple modes of communication/interaction.
3. Use the face-to-face and asynchronous tools to provide community and to leverage different types of learning.
4. Conduct pre-exchange work with culture, intercultural awareness and assumptions, first focusing on the “me” in culture.
5. Encourage a playful and reflective use of technologies to negotiate new norms/expectations with peer collaborators.
6. Take time to build community, group norms and investment in the group.
7. Model social presence, intercultural curiosity/competence with a supportive teacher presence.
8. Actively monitor interactions, exploiting rich points to build intercultural competence.
4. References


Creating activities from adaptive learning objects

Vilson J. Leffa
Universidade Católica de Pelotas
Pelotas, Brazil

Abstract

Open Educational Resources (OERs) can be defined as Learning Objects (LOs) that are easily created and stored in repositories to be freely shared, used and reused by teachers and students. While all of these features add value to OERs, there is one aspect in which OERs fail to meet the standards expected by recent practices in e-learning, and that is their difficulty in offering a reasonable level of adaptability. This is the problem addressed in this paper. The solution proposed is a division of learning objects into modules and activities. Modules are smaller, mouldable components build by the teacher and for the teacher. They can be shared, used, reused, and, mainly, adapted by the teacher to meet specific needs. Activities are larger blocks mounted by the teacher from one or more modules to be used by the student. Every time a teacher mounts an activity he or she can create, incorporate and/or adapt previous modules, prepared by him/herself or by other teachers. A specific computer program, built on Open Source Software, was created to test the proposed system. Further testing with both teachers and students has produced favourable results. Using observation, questionnaires, and interviews, we found that teachers preferred the proposed system to other authoring systems they had used before. Students, on the other hand, showed that they enjoyed being assisted in their performance by the automatic feedback provided by the learning objects prepared by the teachers.

Keywords: Learning Objects; Open Educational Resources; Authoring Systems; Reusability

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1. Introduction

Open Educational Resources (OERs) can be approached from a technological or a dialectical perspective (Devan & Tullio, 2008; Neil, 2011), both associated with the idea that things change. In the area of CALL, in spite of its traditional link with technology, the association has been closer with dialectics, in the sense of getting it out in the open (Attwood, 2009), as we can see in the following definitions of Learning Objects (LOs), presented at the beginning of the century, and the more recent definition of OERs:
Learning Objects:

[D]igital resource that can be reused to support learning...[including] small bits of text, animations, and smaller web-delivered applications...[and] larger reusable digital resources... such as a complete instructional event.
(Wiley, 2000, p. 7)

Open Educational Resources:

[R]esources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.
(Atkins et al., 2007)

Both LOs and OERs are defined as resources, both include large and small objects, and both assume the same technology; the only difference is the dialectical orientation of OERs, made clear in the first sentence with the instruction that the resources should reside “in the public domain”, allowing for “free use”. What may have emerged as a commodity in a capitalist market (LOs) is now explicitly defined as public domain (OERs).

My contention is that the technological aspect should be reconsidered, not in detriment of the dialectic orientation, but on the contrary, as a way of improving it. LOs are typically monolithic chunks assembled with other monolithic chunks to produce larger units of learning. Technology can make the chunks adaptive, restructuring them internally to produce customized teaching units, grounded on the atom metaphor as proposed by Wiley (1999), but going beyond it. I believe this approach to LOs has a better chance of affording collaboration between students, between teachers and between teachers and students. This will be demonstrate briefly in the following section, summarizing the authoring system developed in my research project and the reactions produced by teachers when preparing the objects and by students when using them in the classroom. Although I use both OERs and LOs, they are not used interchangeably; OERs are in seen more like LOs plus dialectics.

2. Dividing to conquer

Defining LOs on a granularity scale that moves from something as small as a “bit of text” to something as large as an “instructional event” is problematic in two ways: (1) it conflicts with the idea that LOs are chunks to be assembled (Koohang, 2004) and (2) it rejects the notion that LOs do not incorporate an instructional design (Cheal & Rajagopalan, 2007). It is very difficult to treat a large object such as an “instructional event” either as a chunk to be assembled or to deprive it of its instructional element. The solution advanced here for these two problems is to divide LOs into two components: modules and activities. Modules are smaller unassembled objects designed by the teachers and for the teachers, to be refined and combined with other modules. Activities are assemblages of modules made for the students. An authoring system, called Electronic Learning Organizer (ELO, 2013), was built on Open Source Software (PHP) to manage both modules and activities, virtually separated into two repositories: the module repository, accessed by the teacher, and the activity repository, accessed by the students.

When mounting an activity, the teacher can start from scratch, producing new modules or use and adapt modules available in the module repository; every time a module is incorporated into a new activity a copy of the module is created, leaving the previous one intact. The possibility of sharing the modules with other teachers reduces the burden of producing activities for the students.

ELO has been tested by teachers and students on an experimental basis. Teachers enjoyed creating the materials and hearing compliments from their students, sometimes to the point of getting addicted to the system. The students themselves felt valued by their teachers, who spent time preparing activities tailored to their interests. In terms of language learning, students who had difficulty in reading were the ones who benefited the most, diminishing the distance that divided them from the good readers.
3. Conclusions

The unexpected finding in my research using adaptive LOs was the difference in post-test performance between poor student and good students. For the bright students it made no difference whether or not they used LOs, probably because they had little to improve from their entrance level. The progress demonstrated by the poor students in EFL reading comprehension tasks, however, was impressive, sometimes to the point of equaling the performance of the best students. The positive attitude demonstrated by teachers and students, their enjoyment in preparing and doing the activities and their solidarity in sharing their productions suggest that a focus on technology can provide the necessary affordance for citizenship. The interoperability principle brought by the authoring system, allowing for students and teachers to bring their own devices, expands collaboration and facilitates implementation of the four ‘R’s of OERs: Reuse, Redistribute, Revise, Remix (Hilton et al, 2010). The point of view expressed by Hodgins (2002, p. 76) that LOs are “destined to change the shape and form of learning, ushering in unprecedented efficiency of content design, development, and delivery” probably sounds exaggerated, but if LOs are treated as adaptive OERs, the chances are greater.

4. Acknowledgements

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5. References


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Rethinking sustainable CALL classroom integration

Aubrey Neil Leveridge
Graduate Institute of Network Learning Technology
Jhongli, Taiwan

Jie Chi Yang
Graduate Institute of Network Learning Technology
Jhongli, Taiwan

Abstract

Language instructors have a vested interest in providing learning environments high in quality and efficiency while increasing learner motivation. Such environments facilitate learning and inspire students to continue learning. Thus, when technology is integrated into classroom settings it must also be complementary, enhancing the overall quality of the lesson, aiding learning, and motivating students to continue learning. When these ends are achieved, computer assisted language learning (CALL) becomes sustainable. However, these ends are not always achieved. The mere integration of computers into language learning classrooms does not guarantee favourable learning and instructional outcomes for various reasons. Moreover, in some cases, the integration of CALL may be antithesis to the advancement of language learning. Continuing in this vein, this paper discusses examples of how technology has been integrated into and employed in English-as-a-foreign-language (EFL) classroom environments in order to achieve desired learning outcomes, yet has negatively influenced the quality of instruction, the motivation of students, and the overall efficiency of both learning and instruction. Moreover, this paper argues that there are two fundamental explanations for this negative influence: (1) the designs of the CALL systems do not match the pedagogical approach of the instruction, and (2) CALL systems are being employed as an extension of traditional teaching methods. This paper demonstrates that the examples discussed as well as the explanations given are issues relevant to all areas of CALL. We recommend that in order to create sustainable CALL, the design of CALL systems must first be considered from various pedagogical aspects, particularly those aspects in which the systems are to be employed, and second that CALL systems be implemented with the intent to facilitate learning, not only to be extensions of existing practices and tools.

Keywords: English language learning; classroom technology integration

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1. Introduction

A general goal of education is to provide learning environments that are both high in quality and efficiency, while increasing learner motivation. Recent studies have established positive outcomes regarding the integration of technology into English-as-a-foreign-language (EFL) learning environments enhancing: instructional quality (van Olphen, 2007); learning efficiency (Huang & Sung, 2010); and learning motivation (Cullen & Greene, 2011). Other studies have signified that such positive outcomes may not always be achieved (see Sang et al., 2010; Belland, 2009). As such, the mere integration of technology into language learning classrooms does not
guarantee favorable outcomes. Moreover, in some cases, the integration of such technology may be antithesis to the advancement of language learning.

Continuing in this vein, reflections on how technology has been integrated into EFL classrooms in order to achieve desired learning outcomes will be discussed. Particular attention will be paid to specific examples of how this integration negatively influenced both learning and instruction, so that recommendations for future integrations may be made.

2. Method

Nine university instructors who taught a total of 60 EFL classes were included in this study. Four of the instructors were Taiwanese with English as their second language, while the remaining five were native English speakers: two Americans, one Canadian, two Australians, and one from the UK. All were highly experienced EFL instructors and had extensive backgrounds with applied CALL. With the wide range of instructional styles and learner proficiencies, the integration of technology varied greatly from class to class.

To realise the aim of this paper, technology usage in EFL classes at a university in Taiwan was observed over one semester and the instructors of these classes were interviewed three times. A wide range of technology was available for integration in each classroom: student answering systems, audio and video recording equipment with several wireless microphones, as well as projectors and screens.

3. Discussion

From the observations of technology usage, two distinct modes of delivery were prevalent: passive and active. The passive mode may describe instruction in which the teacher controlled the technology and the students were required to passively watch or listen, i.e. the use of ready-made PowerPoint presentations as an alternative to writing examples on the whiteboard. The active mode, which may be described as a more student-controlled use of technology, i.e. the students actively used the technology to assist in their use of English while the instructor took a role as more of a facilitator. All instructors employed both active and passive styles of instruction.

The instructors who employed a more passive style of instruction indicated that the technology provided a more ‘efficient’ method of disseminating instructional content. Larger amounts of information and more colourful examples via the projector and screen could be taught. However, they indicated (1) that the students may not pay as much attention as hoped, and (2) the importance of passing exams as a goal of instruction, as opposed to conversing in the target language.

On the other hand, instructors who had a more active style of instruction found that the technology could be somewhat inhibitory, as it often took the focus away from the content and placed it on the technology itself. One example of this was a student-made video that contained excellent special effects as well as an exciting soundtrack. The audience was more interested in the effects and how they were made rather than focusing on the language usage. However, that particular instructor used the students’ interest in the technology to create a new dialogue in the target language. In this particular class an emphasis was placed on communication. The technology incorporated into the classroom tended to inhibit general discussions or communications as the instructors stated that students found the integration of built-in microphones and chat equipment to be cumbersome. The integration of readily available equipment was often ignored during class discussions.

Instructors who took a more active approach often integrated similar types of technology, but utilized it in a different manner. For example, PowerPoint presentations were often displayed on the classroom whiteboard instead of the screen while the students were asked to use markers to write answers, draw pictures or choose specific items, in a similar style to using a smart board. During the interviews, instructors noted that this was a great way to involve the students in the learning process, yet difficult in that students were not accustomed to this type of instruction. Integrating the technology into the class took up more class time that could have been spent in conversation. They believed that it was difficult for the students to become involved and participate, further stressing that many students were unaccustomed to this style of instruction and failed to see its benefits.

Some of the instructors integrated the equipment installed in all of the four classrooms. In particular, student devices were installed at each desk, networked and controlled via two computer systems located at the instructor’s desk. These systems facilitated instructor directed student chat, as well as to answer questions through various methods, i.e. pressing related buttons for multiple-choice or by voice recordings. All answers
were recorded digitally for later evaluation. While the system allowed the recording of vast amounts of data and permitted the instructor to review the data and focus on specific instructional or learning problems, one particular problem arose: the system, regardless of how it was integrated, redirected the focus of instruction away from the material or the students, and placed it on the system itself. Instructors indicated that the system garnered all attention. Students compared answers displayed on others’ LED indicators. Moreover, the integration placed limits on students as they were required to answer questions during a set period of time and could no longer go back to previous answers to change them as they could with pencil and paper.

The classroom system installation created several unforeseen issues that affected instruction. One was the use of two computers to control the system. Instructors were confused by multiple interfaces and spent more time on running the equipment. A second issue involved the placement of the monitors. The instructor’s desk was placed at the front of the classroom on the right hand side, so the class was directly in front and to the left with the monitors placed on the far right hand side of the instructor’s desk. This placement required the instructor to face away from the class, which was particularly troublesome during examinations.

Finally, the instructors indicated that students also integrated their own technology by using smartphones during class, but undesirable usage, i.e. calling and/or chatting, was banned. Instructors indicated that students were highly motivated towards smartphone usage and noted that the students no longer took notes in class, but instead photographed the content. Smartphones were integrated because they include apps for translation, and they were also used to create self-introduction videos, later exchanged with Chinese-as-a-second-language students.

4. Conclusions and recommendations

The aim of this paper was to reflect on technology integration into English-as-a-foreign-language (EFL) classroom environments. Upon reflection, the success of integration is widely determined by the instructor and the students. Different instructors (and students) will find alternative methods of integration regardless of the initial concept or designated integration. It is these alternative methods that sustain CALL integration, as they tend to provide more positive results in a wider variety of classroom learning situations. Original designs of integration may be employed as suggested, but innovation of actual usage allows more tailored instruction, meeting different learning requirements. This reflection is not without limitations: as the equipment installation was new, it may have an initial novelty effect. Finally, future integrations of technology into classrooms need to follow through to instruction and should be more aware of component placement, restrictions of student and/or instructor movement, as well as line of sight for placement of visual objects, as these issues may have negative instructional influences.

5. References


The role and scope of non-SLA theories in CALL: Broadening the horizons

Mike Levy
The University of Queensland
Brisbane, Australia

Abstract

This presentation will build upon the work of Chapelle (2009) and Hubbard (2008) by mapping the use of non-SLA theories in CALL with a view to exploring their purpose, function, and use. It will sample a number of theories, proto-theories or pseudo-theories, all of which have been referred to in CALL studies, including, for example, complexity theory, activity theory, flow theory and ecological CALL. The goal is to delineate more precisely what these theories offer CALL researchers, designers and developers that SLA theories do not. The discussion will also include studies that combine SLA theory with non-SLA theory in their rationale.

Clearly, there will not be sufficient time in a single presentation to explore all complexities of each theory and their application in CALL. Therefore, the goal will be to highlight similarities and differences in the role and function of the non-SLA theories in CALL. Through looking at SLA theory in CALL in relief, so to speak, i.e., through viewing CALL through alternative theoretical perspectives, the presenter will delineate possible limitations of SLA theory and CALL, consider the value or otherwise of combining theories, and point towards further development, focus and resolution, especially with regard to making future CALL research as productive as possible.

Keywords: SLA; CALL theory; research; interdisciplinary

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1. Introduction

CALL by its very nature is both interdisciplinary and relatively new as a venue for serious research and, as a result, it has been subject to many influences theoretically, especially from variously related, older and more established disciplines. Theoretical influences in past and current work are apparent from areas such as psychology, SLA, language learning pedagogy, education, media studies and, more recently fields such as virtual worlds and game-based learning and design. The net result has been at times confusing as different theories vie for prominence and acceptance by those in the field.
CALL is also largely a consumer of theories from other sources, not only at the level of teaching and development (Levy and Stockwell, 2007, p. 39) but arguably also in its research tradition. Some examples from CALL Research Perspectives (Egbert & Petrie, 2005) are: sociocultural perspectives on CALL; a systemic functional linguistics perspective on CALL; flow as a model for CALL research, and; situated learning as a framework for CALL. Further theories or frameworks for CALL, but not included in this volume, are activity theory (Blin, 2004), game-based learning (Cornillie, Thorne & Desmet, 2012), and ecological CALL (Lafford, 2009), among many others.

Huh and Hu (2005) insist upon grounding all CALL research in SLA, and lay much of the blame for weaknesses in previous research on cases where SLA was not the point of departure. Yet many of the chapters in CALL Research Perspectives do not refer to SLA at all, or only in passing, not as a foundation.

In her chapter entitled, ‘Interactionist SLA theory in CALL research’, Chapelle (2005) provides a valuable overview of the benefits and limitations, especially as far as the leading theory of SLA is concerned in relation to CALL. There are undoubtedly strengths, but of the limitations, Chapelle (2005, p. 61) notes: “Doesn’t provide constructs for looking at the complete context of CALL use” and “Has a narrow pragmatic focus, dealing primarily with linguistic functions associated with misunderstanding”. It appears that it is the problem of accommodating contextual features/factors that generate the central problem or dilemma from the interactionist perspective.

2. Method

This paper will look at the use and role of theory in CALL, employing techniques that aim to identify CALL projects that allow the problem to be considered in terms of its breadth and depth. With reference to the former, for example, in a review of theory references in a single specialist journal (the CALICO Journal) over the period 1983-2007, Hubbard (2008) extracted references to 113 distinct theories across 166 articles using a global search function on the CALICO website. With regard to latter, an in-depth analysis of the role of theory in CALL in a single project, a recent example described in a ReCALL Special Issue on digital games for language learning is instructive (see Cornillie et al., 2012). This study steps beyond SLA theory per se, though it still includes it, “by interweaving theory in the SLA and GBL (game-based learning) literatures” (p. 258). The first words of the title of Cornillie et al.’s (2012) work give away the essential conundrum at the centre in the design of a language learning game, “Between learning and playing?”. It is this core problem that engages Cornillie and his research team as they aim design corrective feedback such that learning is facilitated while, at the same time, the high levels of interactivity and engagement in game play are not interrupted. Reference to the GBL literature is essential in the design of the game. Reliance on SLA theory alone is much more closely circumscribed and restrictive and would be insufficient to provide a basis or point of departure for an effective game. Add methodology to paper here. The methodology employed in the work should be described in sufficient detail so that the project can be understood by someone not involved in the investigation.

3. Discussion

Hubbard’s (2008) review identified four primary sources for the theories: (1) language learning-centred extensions of human-computer interaction or technology in education theories, (2) technology-centred extensions of second language acquisition theories, (3) learning theories from psychology and education, and (4) linguistic theories. With the exception of a small number of general labels (such as ‘SLA theory’ and ‘learning theory’), there were numerous specific references (activity theory, item-response theory, speech-act theory, etc.). Surprisingly, there were no ‘dominant’ theories appearing with any consistency.

In terms of the in-depth example, Cornillie et al. (2012) note that the GBL literature is less well articulated [than SLA] with respect to what kinds of feedback best support learning in games, and if the purpose is to educate (rather than purely entertain), feedback mechanisms as they relate to learning remain underexplored. Games usually stimulate exploratory behavior, and aim to motivate players to find ‘correct’ answer is through trial and error, and seldom give away answers to players (p. 259). Thus, the conceptualisations of feedback in GPL and SLA appear to differ, as feedback in games lacks the provision of correct responses and rule explanation. (p. 260)

Clearly, an appreciation of the context plays a key role here. The context of the game is not the same as the typical teacher-fronted face-to-face language classroom. Care needs to be taken, therefore, in using theories developed and tested on face-to-face settings in game-based learning environments. As has been noted earlier, it
is the problem of accommodating contextual features/factors that generate the central problem or dilemma from the interactionist perspective.

4. Conclusions

For the near future, at least, one can expect the number and range of theories invoked for research and development in this field to increase. What will be interesting is to see over time what sorts of progress can be made in establishing useful theory groupings and the roles the various theories contribute to the project design as a whole. Further, theory is often used as a point of departure for researching new technologies in language learning, and we have noted there are now many theories from which to choose. In some cases, it may not be so much a question about whether a theory is right or wrong, or has an application in a particular context, or even that it may potentially some day be of value, but whether the theory is capable of generating a research agenda with studies that can be replicated and with findings that are ultimately of broader value and applicability. Building a research agenda is important, and is not a trivial question. We are a field that has limited resources—what research that is done should count and be of value to the development of the field.

5. References


The effect of an electronic storybook on kindergarten children’s reading comprehension: do games help?

Poh-Hwa Liang  
Chaoyang University of Technology  
Taichung, Taiwan

Hsiao-Chun Chen  
Chaoyang University of Technology  
Taichung, Taiwan

Abstract

The purpose of this study was to investigate the effect of an electronic book (e-book) on kindergarten children’s reading comprehension. Seventy-one children from low and middle socio-economic status (SES) families were randomly assigned to one of the two options: reading an e-book with games, or reading an e-book without games (control group). Children were tested on reading comprehension after reading an e-book. The results revealed that the scores of children’s reading comprehension were above the average in both groups. In addition, there were interaction effects between the games of the electronic storybook and SES of children’s families. In other words, there was no difference for middle SES children regarding their use of an e-book with or without games. However, for low SES children, their reading comprehension scores were higher on e-book reading without games than e-book reading with games. Moreover, when reading an e-book without games, low SES children’s reading comprehension scores were higher than middle SES children. Finally, some suggestions are proposed for electronic books designers, teachers, young children’s parents, and future research.

Keywords: Electronic storybooks; kindergarten children; reading comprehension

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6. Introduction

New types of reading evolve with the emergence of electronic storybooks. The difference between the electronic storybooks and traditional storybooks is that electronic storybooks provide children with some technological functions, such as: oral reading of printed text, animation, dictionary option, and hotspots (Shamir, 2009; Korat, 2010). Although animations and games can attract young children and motivate them, such functions may also distract them from reading the stories (Labbo & Kuhn, 2000; Roskos, Brueck, & Widman, 2009). Korat & Shamir (2007) indicated that although both low SES and middle SES kindergarten children improved on their emergent literacy after the educational e-book activity, low SES children’s emergent literacy levels showed
greater improvement rates than did those of the middle SES children. However, Korat & Blau (2010) reported that there were no significant differences were found in the progress of young children’s emergent literacy from the two SES groups after e-book reading sessions. Therefore, this study used experimental design to examine the effect of an e-book on low and middle SES kindergarten children’s reading comprehension. The research questions are: (1) Does the function of an e-book (multimedia game activities) that young children use influence their reading comprehension? (2) Does SES influence young children’s story comprehension regarding e-book reading?

7. Method

2.1. Participants

The participants for the current study were recruited from a public kindergarten at Taichung city in Taiwan. The kindergarten teachers were asked to help identify 4 and 5-year-old children as potential participants for this study. Then their mothers were invited to participate in the study by a letter explaining its purposes and procedures. Mothers were asked to indicate their agreement for their children to participate by signing and returning the informed consent form to the researcher. Seventy-three children participated in the study, and these children were randomly assigned into the treatment and control group (see Table 1). Finally, seventy-one children had finished the experiment.

Table 1.

Children’s Background (N = 73)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Treatment</th>
<th>Control</th>
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</thead>
<tbody>
<tr>
<td>Age (months)</td>
<td></td>
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<tr>
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<tr>
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<td>23</td>
</tr>
<tr>
<td>Low</td>
<td>14</td>
<td>15</td>
</tr>
</tbody>
</table>

2.2. Procedures

Prior to data collection, a sample of children were piloted. Measures and procedures were modified based on the feedback from the pilot participants. All the sessions took place at the children’s schools during school hours. Children were individually taken to a room in the kindergarten where a computer was set up by the researcher. A video camera was also positioned to record the experiment.

Each child was instructed about the procedures. The e-book children used in the study was “Just Grandma and Me” (Chinese version). Before using the e-book, children were instructed in how to use it. Children in the
treatment group were introduced to the e-book reading/listening features and multimedia activities (games). Children in the control group were only introduced to the e-book reading/listening features. E-book reading/listening session was 20 minutes in length. When instructing the children, the researcher demonstrated how to use the software based on the written instructions. The children were also given an opportunity to ask questions and practice with the computer for five minutes the experiment started. After the e-book reading/listening, children were tested regarding their story comprehension.

2.3. Reading Comprehension Test

After reading/listening to the e-book, each child was tested on story comprehension. This test consisted of six questions about the e-book: four on information that appears in the story and two on information that can be inferred from reading/listening to the story. Each question was presented with four possible answers and children were asked to identify the correct one. The total range of the scores was 0-6. The Alpha score for the reading comprehension test was 1.

8. Discussions

The mean scores and standard deviations on young children’s reading comprehension regarding e-book reading with games and e-book reading without games (control group) are presented in Table 2. To analyse the effect of the e-book reading, we used two-way ANOVA to compare the reading comprehension scores of the children in the treatment and control groups (see Table 3). There was a significant main effect for group ($F(1, 67) = 21.43, p < .01$), but the reading comprehension scores showed no significant SES differences ($F(1, 67) = .17, p = ns$). There was also a significant interaction between group and SES ($F(1, 67) = 4.30, p < .05$).

<table>
<thead>
<tr>
<th></th>
<th>E-book reading with games</th>
<th>E-book reading without games</th>
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<tbody>
<tr>
<td></td>
<td>n</td>
<td>$M$</td>
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<tr>
<td>Middle SES</td>
<td>20</td>
<td>4.15</td>
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<tr>
<td>Low SES</td>
<td>14</td>
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<tr>
<td>Total</td>
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<td>3.97</td>
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Table 3.
Analysis of variance of children’s reading comprehension on e-book reading

<table>
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<th>df</th>
<th>MS</th>
<th>$F$</th>
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<tbody>
<tr>
<td>Group (A)</td>
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<td>1</td>
<td>25.09</td>
<td>21.43**</td>
</tr>
<tr>
<td>SES (B)</td>
<td>.19</td>
<td>1</td>
<td>.19</td>
<td>.17</td>
</tr>
<tr>
<td>A X B interaction</td>
<td>5.03</td>
<td>1</td>
<td>5.03</td>
<td>4.30*</td>
</tr>
</tbody>
</table>

* $p < .05$. 
**p < .01.

A further simple main effect analysis of reading comprehension scores showed a significant difference between treatment and control groups for low SES children \((F(1, 27) = 21.00, p < .001)\). As Figure 1 shows that for low SES children, their reading comprehension scores were higher on e-book reading without games \((M = 5.47, SD = .74)\) than e-book reading with games \((M = 3.71, SD = 1.27)\). No significant group differences were found for middle SES children. There was also a significant difference between low and middle SES children in the control group \((F(1, 35) = 5.25, p < .05)\). As Figure 2 shows that when reading an e-book without games, reading comprehension scores for low SES children were higher than middle SES children \((M = 4.82, SD = .91)\).

Figure 1. Interaction effect of group (e-book reading with games and control) by SES (middle and low)
9. Conclusions

We investigated the effect of an e-book on kindergarten children’s reading comprehension. The findings show that there was an interaction between children’s group and SES. For low SES children, their reading comprehension scores were higher on e-book reading without games than e-book reading with games. Moreover, when reading an e-book without games, reading comprehension scores for low SES children were higher than middle SES children. It seems that for middle SES children, the use of multimedia activities (games) did not influence their story comprehension a lot. However, for low SES children, the use of reading/listening feature of an e-book helped them perform better on the story comprehension test than the use of both reading/listening feature and multimedia activities. When only using reading/listening feature of an e-book, low SES children also performed better than middle SES children regarding story comprehension. Such results indicate the possibilities that multimedia activities may distract children from reading/listening to an e-book for low SES children. However, future research may clarify if there are other compounding factors influencing the process of e-book reading for low SES children.

10. References


Exploring the efficacy of CMC on second language writing: A meta-analysis

Huifen Lin  
National Tsing Hua University  
Hsinchu, Taiwan

Mary Voong  
National Kaohsiung Normal University  
Kaohsiung, Taiwan

Abstract

This study attempted to provide a current synthesis investigating the efficacy of computer-mediated communication (CMC) on L2 writing. Through an exhaustive literature search of studies from 2000 to 2012, 33 eligible studies were included. An overall medium effect (Cohen’s d=0.59) was found for CMC on L2 writing. In addition, ten study-level variables were further analysed to determine the sources of variance among the 33 effect sizes. Group size, treatment duration, research context, task type and communication mode were found to be potential factors that might moderate the effects of CMC on second language writing.

Keywords: L2 writing; Meta-analysis; moderator analysis

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1. Introduction

The earliest integration of technology in language classrooms for writing started with word processing, and then it evolved into computer-assisted language learning (CALL) and computer-mediated communication (CMC). It has changed and improved the process of writing, which includes prewriting, drafting, editing, proofreading, and publishing (Hyland, 2003). In other words, the impact of technology has changed writing from a linear process to a nonlinear process. Up until now, the most researched and discussed technology for language classrooms is CMC (Salaberry, 1996), which is defined as communication across two or more networked computers. CMC is subdivided into synchronous computer-mediated communication (SCMC) and asynchronous computer-mediated communication (ACMC). SCMC in the writing instruction allows students to communicate in real-time on their computers at the same time, such as Yahoo Messenger, MSN Messenger, and ICQ. ACMC in writing instruction allows students to communicate in a delayed method, such as email, discussion forms, and blogs. Through the diffusion of CMC in teaching L2 writing, it is hoped that students will have plenty of opportunities to engage and be exposed to meaningful and authentic communication in the target language (Belcher, 1999).
An great deal of research has been conducted on L2 writing, followed by abundant research on the integration of CMC in L2 writing. The full potential of CMC for L2 writing has not been explored because researchers have been unable to conclusively agree on the effectiveness of CMC in teaching writing. As indicated by Hyland (2003), there are potential advantages and disadvantages of CMC writing instruction. Some potential advantages include allowing equal participation rights, promoting student-entered instruction, minimizing social cues, and providing teachers with a record of individual participation. Conversely, some disadvantages include the uncertainty as to whether it enhances writing, weaker students are left behind, participation decrease for students with technophobia, and a lack of face-to-face contact among students. Hence, further in-depth research synthesis is necessary to demonstrate a better picture of the effectiveness of CMC in teaching L2 writing.

2. Method

A collection of research studies was identified through an exhaustive search of literature through various sources. These sources include: (1) academic journals, (2) computerized bibliographic databases, (3) conference proceedings, (4) references in studies, (5) references in the relevant meta-analysis study, (6) journals from different countries and (7) the internet. A total of 1,075 studies on CMC in ESL, EFL, or SLA were identified. At this stage, the researcher needed to filter the irrelevant studies and keep those that were eligible for the quantitative meta-analysis. Hence, further screening and reviewing was conducted based on an inclusion and exclusion criteria. Thirty eligible studies were then identified as meeting all the inclusion criteria and were coded at study-level variables. For the effect size calculation, this study used the procedures suggested by Lipsey and Wilson (2001, pp. 112-121) as guidelines to determine the essential statistical information and effect size format to be utilized. Effect sizes were then computed for each study and an overall effect size was calculated to present the overall effect of CMC in L2 writing.

3. Discussion

A total of 33 eligible studies were included in this meta-analysis, and it produced a weighted mean effect size of 0.55 from the fixed effects model and a mean effect size of 0.74 from the random effects model. This indicates that CMC had an overall medium effect on L2 writing. The confidence interval (0.44 to 0.65) does not include zero, so it suggests that the effect of CMC in L2 writing in these studies might be statistically significant. However, it should be noted that not all the 33 studies had results that had statistical significance and positive effect size. Table 1 presented the effect sizes for the thirty included studies.

4. Conclusions

The current meta-analysis was conducted to provide an overall picture of the inconclusive findings of CMC on L2 writing and insights for future researcher. Thus, the results have several pedagogical implications. First, the overall medium effect of CMC on L2 writing implies that CMC can be a supporting pedagogical tool to help L2 learners improve their writing skills. Second, since there was an overall medium effect of CMC, it is possible that CMC fosters grammatical and lexical development. It should be noted that this study did not do a separate analysis for grammatical and lexical development as there were too few studies available. Third, the effect sizes of the long and short treatment durations did not appear to indicate a concise conclusion of the ideal treatment length. Both long durations of greater than 10 weeks had a large and small effect size, while the short duration of 10 weeks or less, and less than a week, had a medium and a negative effect size. These values suggest that greater than 10 weeks was the most effective treatment length. Lastly, the analysis of some study-level variables highlighted some curriculum design characteristics which appear to produce the most benefits for learners in L2 writing courses. As mentioned earlier, the length of the course should be no less than 10 weeks, and it should be conducted in the SCMC mode, especially using a type of instant messenger (e.g. MSN Messenger, Google Chat, and Yahoo! Messenger). The course activities should be communicative tasks that are completed in class. Having students do the activities during class time is preferred because instructors can be available to provide immediate assistance (Chenoweth, et al., 2006; Li, 2009), and keep the students on-task. Moreover, instructors should put students into small groups of two to five people to equalize the participation frequency for each student. Finally, instructors should be proactive in evaluating whether their students’ learning needs and goals have been addressed by the implementation of CMC in L2 writing courses.
Table 1: Effect size for primary studies included in the analysis

<table>
<thead>
<tr>
<th>Study name</th>
<th>Hedges’s g</th>
<th>Standard error</th>
<th>Lower limit</th>
<th>Upper limit</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huang, S. Y., &amp; Chang, Y. (2009)</td>
<td>1.311</td>
<td>0.215</td>
<td>0.950</td>
<td>1.732</td>
<td>0.000</td>
</tr>
<tr>
<td>Lee, C.-L., &amp; Loui H.-C. (2009)</td>
<td>1.399</td>
<td>0.597</td>
<td>0.229</td>
<td>2.589</td>
<td>0.018</td>
</tr>
<tr>
<td>Shang, H.-F. (2010)</td>
<td>-0.249</td>
<td>0.222</td>
<td>-0.633</td>
<td>0.147</td>
<td>0.264</td>
</tr>
<tr>
<td>Huang, H. T., D. H., &amp; H. S. T. A. (2008)</td>
<td>0.587</td>
<td>0.355</td>
<td>0.031</td>
<td>1.259</td>
<td>0.050</td>
</tr>
<tr>
<td>Sour, S. (2003)</td>
<td>5.904</td>
<td>1.136</td>
<td>3.640</td>
<td>9.374</td>
<td>0.000</td>
</tr>
<tr>
<td>Feiler, T., &amp; Apple, M. (2006)</td>
<td>1.737</td>
<td>0.361</td>
<td>1.239</td>
<td>2.245</td>
<td>0.000</td>
</tr>
<tr>
<td>Zold, M. (2011)</td>
<td>0.629</td>
<td>0.642</td>
<td>4.671</td>
<td>7.367</td>
<td>0.000</td>
</tr>
<tr>
<td>Fageehi, A.L. (2011)</td>
<td>0.549</td>
<td>0.426</td>
<td>2.549</td>
<td>4.091</td>
<td>0.000</td>
</tr>
<tr>
<td>Pavon, L.C. (2009)</td>
<td>0.456</td>
<td>0.251</td>
<td>0.072</td>
<td>0.839</td>
<td>0.020</td>
</tr>
<tr>
<td>Sun, Y.-C. (2010)</td>
<td>0.417</td>
<td>0.299</td>
<td>-0.169</td>
<td>1.003</td>
<td>0.103</td>
</tr>
<tr>
<td>Peng, C. Y., &amp; Hsu, P. Y. (2008)</td>
<td>0.779</td>
<td>0.200</td>
<td>0.230</td>
<td>1.328</td>
<td>0.005</td>
</tr>
<tr>
<td>Fustelle, M. &amp; J. d. I. (2009)</td>
<td>-0.451</td>
<td>0.213</td>
<td>-0.760</td>
<td>-0.144</td>
<td>0.030</td>
</tr>
<tr>
<td>Senders, R. E. (2005)</td>
<td>1.311</td>
<td>0.215</td>
<td>0.950</td>
<td>1.732</td>
<td>0.000</td>
</tr>
<tr>
<td>Cheng, Y. Y. (2008)</td>
<td>0.321</td>
<td>0.273</td>
<td>-0.583</td>
<td>0.285</td>
<td>0.221</td>
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<tr>
<td>Kost, C. R. (2009)</td>
<td>1.533</td>
<td>0.203</td>
<td>1.125</td>
<td>1.931</td>
<td>0.000</td>
</tr>
<tr>
<td>Zhou, H. J. (2009)</td>
<td>0.427</td>
<td>0.277</td>
<td>0.004</td>
<td>0.850</td>
<td>0.000</td>
</tr>
<tr>
<td>Yang, M. L. (2009)</td>
<td>0.915</td>
<td>0.243</td>
<td>-0.451</td>
<td>0.451</td>
<td>0.051</td>
</tr>
<tr>
<td>Lin, S. M. (2009)</td>
<td>0.712</td>
<td>0.352</td>
<td>-0.056</td>
<td>1.420</td>
<td>0.009</td>
</tr>
<tr>
<td>Liu, C.-N. (2007)</td>
<td>0.950</td>
<td>0.231</td>
<td>0.500</td>
<td>1.412</td>
<td>0.000</td>
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<tr>
<td>Jou, Y.-A. E. (2008)</td>
<td>0.499</td>
<td>0.200</td>
<td>0.059</td>
<td>0.941</td>
<td>0.104</td>
</tr>
<tr>
<td>Hung, P.-Y. (2007)</td>
<td>0.799</td>
<td>0.298</td>
<td>0.204</td>
<td>1.372</td>
<td>0.000</td>
</tr>
<tr>
<td>Li, W. L. (2009)</td>
<td>0.122</td>
<td>0.298</td>
<td>-0.462</td>
<td>0.766</td>
<td>0.882</td>
</tr>
<tr>
<td>Cheng, Y. C. &amp; Hsu, H.-T. S. (2008)</td>
<td>1.311</td>
<td>0.215</td>
<td>0.950</td>
<td>1.732</td>
<td>0.000</td>
</tr>
<tr>
<td>Lu, K.-Y. &amp; Loui, H. C. (2004)</td>
<td>0.225</td>
<td>0.188</td>
<td>-0.140</td>
<td>0.590</td>
<td>0.226</td>
</tr>
<tr>
<td>Gonzalez-Bruce, M., &amp; Perez, L.C. (2008)</td>
<td>0.912</td>
<td>0.370</td>
<td>0.007</td>
<td>1.837</td>
<td>0.028</td>
</tr>
<tr>
<td>Song, W., &amp; Usatue, S. (2009)</td>
<td>1.233</td>
<td>0.471</td>
<td>0.310</td>
<td>2.156</td>
<td>0.009</td>
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<tr>
<td>Liang, M.-Y. (2008)</td>
<td>0.973</td>
<td>0.264</td>
<td>-0.444</td>
<td>0.598</td>
<td>0.762</td>
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<tr>
<td>Lee, H.-S. &amp; Enomoto, R. (2008)</td>
<td>-0.552</td>
<td>0.450</td>
<td>-1.950</td>
<td>0.855</td>
<td>0.242</td>
</tr>
<tr>
<td>Thomas, A., Dusa, D., Cunningham, E., Blanch S., &amp; Topping (2009)</td>
<td>0.000</td>
<td>0.314</td>
<td>-0.615</td>
<td>0.615</td>
<td>1.000</td>
</tr>
<tr>
<td>Condon, D., &amp; Wang, R. (2004)</td>
<td>-0.417</td>
<td>0.200</td>
<td>-1.177</td>
<td>0.343</td>
<td>0.262</td>
</tr>
<tr>
<td>Jiao, D. W. (2009)</td>
<td>0.927</td>
<td>0.200</td>
<td>0.379</td>
<td>1.476</td>
<td>0.001</td>
</tr>
<tr>
<td>Simsek, C. (2010)</td>
<td>0.459</td>
<td>0.240</td>
<td>-0.022</td>
<td>0.930</td>
<td>0.051</td>
</tr>
</tbody>
</table>

5. References


Lu, K.-Y., & Liou, H.-C. (2004). Effects of e-mail exchanges on EFL senior high school students' English writing. *English Teaching & Learning, 95*-119.


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Social networking, collaborative learning, and emerging technologies: Sustainability claimed and projected

Hsien-Chin Liou  
Feng Chia University

Mei-Mei Chang  
National Pingtung University of Science and Technology

Yu-Chuan Joni Chao  
Providence University

Wen-Chi Vivian Wu  
Providence University

Hsing-Chin Lee  
National Taipei College of Business

Yi-Shan Tsai  
National Tsing Hua University

Abstract

Today, implementation of Web 2.0 social networking sites designed with collaborative language learning tasks is burgeoning; meanwhile, our field has evidenced and envisioned more emerging technologies such as robots. In this symposium, five researchers from Taiwan address sustainability in their CALL projects in the English as a Lingua Franca (ELF) context, and envisage sustainability for the replication and extension of the projects in other ELF contexts, with effectiveness based on task-based learning or learner autonomy. Facebook, wiki and weblogs, discussion boards, and robots were applied in their own local contexts. Two principles motivated our collective efforts. First, learner autonomy can be facilitated by online social interaction. Second, several elements of language learning tasks are stressed (Lai & Li, 2011) by findings of the five studies: connectedness with and resemblance to “real-world” activities, collective exploration of goals in a social milieu, and primacy of meaning. The findings and the project processes are presented with their implications. For instance, the affordance of technology matched with a pedagogical task, and learners’ goals and their autonomous learning can lead to successes of L2 development in the interactive learning community. We argue that CALL provides an optimal environment for task-based autonomous learning design in this Asian context. Through social networking sites, learner interaction is encouraged, which enhances learning effectiveness. These models are generally applicable in other ELF contexts.

Keywords: Task-based language teaching; learner autonomy; sustainability; emerging technologies; SNS

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1. Introduction

Briefly, the five papers presented in this symposium are based on (a) autonomous learning in CALL contexts (AU), (b) task-based language teaching (TBLT), and (c) sustainability in technology use (SUS). The five studies were all conducted in Taiwan, an English as Lingua Franca (ELF) context. In a recent survey study, Lai (2013)
found that language learning motivation, perceived usefulness of technology for learning, and perceived compatibility between technology use and learning expectancies played a dominant role in shaping technology use for self-directed learning or learner autonomy. Meanwhile, developing a willingness to use technology is the core of educational intervention. For CALL instructional design, social interaction would be essential to facilitate autonomous learning.

Task-based language teaching as applied in CALL (Lai & Li, 2011) promises effectiveness with the extra cognitive load and the enhanced authenticity of task performance. Lai and Li further maintain that adopting a TBLT pedagogical cycle that emphasizes pre- and post-task stages can enhance learning effectiveness. Recently, the call for social responsibility and sustainability in technology has attracted more attention. To elaborate sustainability for technological development, Vergragt (2006) maintains:

Sustainability needs to be taught in a holistic way, connecting technology with institutions and values, ecology with economy and society, consumers with producers and governments, short term with long term, well-being with equity, and differences between cultures with global values (p. 22).

The details of the five studies are summarized in Table 1 and Section 2.

Table 1: A summary of details in the five studies presented in the symposium

<table>
<thead>
<tr>
<th></th>
<th>Level of instruction</th>
<th>Use of technology and most relevant theoretical support</th>
<th>Design of the CALL task</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mei-mei Chang</td>
<td>College, 18 college students</td>
<td>Discussion board, AU, TBLT (theoretical support)</td>
<td>3 rounds of in-class discussion sessions</td>
<td>With cognitive skill development, learners were actively involved and took control of learning.</td>
</tr>
<tr>
<td>Joni Chao</td>
<td>College, 32</td>
<td>Wiki &amp; blog AU, SUS</td>
<td>Multiple-draft individual vs. collaborative writing tasks throughout a semester (10 weeks)</td>
<td>Two technologies sustained social construction of knowledge through peer feedback.</td>
</tr>
<tr>
<td>Hsing-Chin Lee</td>
<td>College, 32</td>
<td>Facebook AU, TBLT</td>
<td>T-S online discussions on child literature for 1 semester</td>
<td>Teacher participation of self-disclosure affected student motivation by promoting positive T-S relations.</td>
</tr>
<tr>
<td>Liou &amp; Tsai</td>
<td>College, 16</td>
<td>Facebook TBLT, SUS</td>
<td>Multiple-draft collaborative writing tasks throughout a semester</td>
<td>Development of writing skills and writer identities; promoted collaborative learner autonomy among groups</td>
</tr>
<tr>
<td>Vivian Wu</td>
<td>Primary, 75 3rd graders</td>
<td>Robot (Powerful English Tutor, PET) AU, SUS</td>
<td>3 in-class 50-min sessions (learn alphabet, commands, conversation, &amp; stories)</td>
<td>Ss loved to use robotic TA in the future.</td>
</tr>
</tbody>
</table>
2. The five papers in this symposium

2.1. Web-based discussion in a foreign language learning class

Mei-Mei Chang

The study investigated EFL students’ expression, interaction, and cognitive skill application on the web-based discussion. The research was designed to answer the following research questions.

1. Did students’ expression skills improve through web-based discussion activity?
2. How did students apply interaction skills on the web-based discussion?
3. Did students’ cognitive skills application improve through web-based discussion activity?

A single group experimental study was designed with one independent variable, the web-based discussion, and three dependent variables, students’ expression skills (language production), interaction behavior and cognitive skills application. Eighteen college freshmen participated in this study. A total of three topics, based on the readings, were chosen for group discussion. All the discussion messages from all the participants were collected for the purpose of data analysis. Students’ expression skills were analyzed by sentence clarity (T-unit) and message length (word counts). The Interaction Analysis Model by Gubawardena et al. (1998) was used to analyze participants’ interaction skills. Henri’s (1992) five cognitive categories were used to analyze participants’ cognitive skills. Two subject matter experts analyzed all the data individually and then compared the results to ensure inter-rater reliability.

The results indicate that both Word Count and T-unit increased in Discussion 2 and Discussion 3. Students produced 340 words in Discussion 1, 580 words in Discussion 2, and 579 words in Discussion 3. In terms of T-unit, there were a total of 38, 63, and 72 t-units in three different discussions respectively. The results show that both word counts and the number of T-units increased. Through web-based discussion activity, students’ expression skills in writing improved.

Question 2: Most of the students applied Phase I interaction skills throughout three discussions. In Discussion 1, 16 out of 20 messages were coded as the Phase I interaction skill, Sharing or comparing of information. In Discussion 2, 45 out of 55 messages fell into Phase I interaction skills, and in Discussion 3, there were 49 out of 64 posts classified as Phase I interaction skills. Students prefer sharing information with others or comparing information to negotiating meanings, exploring dissonance or inconsistency among statements.

Question 3: Although the students had little cognitive engagement in Discussion 1 (29.91%), the cognitive skills of elementary clarification, inference, and judgement appeared more frequently in Discussion 2 (48.27 %). It was found the cognitive skill applications up to 65 out of 139 messages in Discussion 3. The cognitive skill of judgement appeared most frequently (52.31%), followed by elementary clarification (20%).

The findings of the study show that students benefited from the web-based discussion activities. Students not only produced more meaningful sentences but also tended to apply cognitive skills more frequently.

2.2. Sustainability of computer-mediated approaches to writing in blended learning

Yu-Chuan Joni Chao

The implementation of blogs and wikis, two popular tools of computer-mediated communication, has become a growing concern in writing courses. Research has documented the effectiveness and benefits of using blogs and wikis for pedagogies of the writing process. Yet how best the affordances of two tools, blogs and wikis, can support learners’ development of writing has scarcely been compared, nor have these tools been compared with the face-to-face (F2F) modality.

This study explored the key factors that most sustain computer-mediated approaches to writing by investigating learners’ perceptions of blog- and wiki-mediated writing tasks in blended learning. Using a four-phase social cognitive model of self-regulation as a conceptual framework to design a college writing course for blended learning, the observational and emulative phases in class for the teacher’s F2F instruction, and the self-controlled and self-regulated phases via computer-mediated communication for learners themselves to write and to interact with peers were documented. In the designed course, 32 English majors participated to post their
individual writing assignments in a blog for five weeks, and after mid-term, they formed a group to do a five-week processed collaborative writing task in wiki. As the pedagogical objective of using blogs and wiki was centered on the process of peer feedback, how to give peer feedback was taught in class so that they could do blog comments and wiki discussion. Peer editing was afforded only in wiki. Three timed-essay tests were conducted, at the first, the eighth and the 17th weeks, for the pre-test, mid-term and final. At the end of the semester, participants reported their perceptions of the task value and outcome attribution by responding to two questionnaires. Follow-up interviews were conducted with five volunteers.

The results of the repeated measures ANOVA analyzing the three writing tests show that there was statistically significant progress. The students’ perceptions of task value show they were generally satisfied with wiki-mediated collaborative writing, while some questioned the enhancement of self-controlled writing or peer feedback via blog. In terms of outcome attribution, two-thirds indicated self-efficacy in writing improvement: a large majority of these students considered that the wiki-mediated collaborative writing task enhanced their writing skills, while some continued to consider the teacher’s corrective feedback as the most important process for them to improve their writing.

Findings of the study suggest (1) technology affordance needs to be matched with pedagogical tasks/activities that construct an interactive learning environment for language learners, and (2) a technology-constructed social cognitive learning environment is a key factor of sustainability for using computer-mediated approaches to the development of language learning.

2.3. Ubiquitous or not? What really affects technological media learning? iPad/Facebook

Hsing-Chin Lee

This paper examined and evaluated the pedagogical effects of teacher-student interaction on a Facebook group page and iPads, and then analyzed sampled data concerning online collaborative discussions based on the reading of children’s literature. The level of teacher participation affects student motivation and can contribute to a more positive teacher-student relationship. In response to teacher-generated questions based on a children’s book, 32 participants were asked to express themselves in English. The messages/reflections that the teacher self-disclosures encouraged participants to frequently access the Facebook group page. Discussions of student feedback concerning their involvement in writing and participating in English and the effects of teacher self-disclosure via Facebook are provided. A survey on how often students posted entries in English to the Facebook group page was conducted.

Benefits of teacher’s self-disclosure include students perceiving the teacher as ‘chilled’ and ‘laidback’. Most importantly, the teacher is considered relatable and not a superior figure who is controlling and serious. When teachers are more open about themselves, students find them to be less menacing and more approachable. When approachable teachers are encouraging, it can be motivating for students.

In conclusion, Facebook is a new form of learning, and a social networking website can be skilfully turned into a learning platform without making students feel ‘obliged’ or ‘invaded’. However, there is a limitation: though smart phones and the internet have taken over most of our lives, there are still those who choose not to use them simply because they do not have them. Some even temporarily disable their Facebook accounts because they don't like the way they are affected by what people post on Facebook or they do not want to feel dependent on their phones.
2.4. Collaborative writing and developing writer identity on Facebook

Hsien-Chin Liou and Yi-Shan Tsai

Since 2004, Facebook has continued to attract more and more online users every day; it is also observed that ELF college learners in Taiwan use Facebook often as of Autumn, 2012 (in this study, every participant used it weekly) but mainly with the purpose for conducting their leisure activities and social networking. As a social networking site, Facebook powerfully links a mass of online users in a country and worldwide through its hypertextual interlinks, group forming, and interacting functions.

Addressing the use of Facebook in their EFL college writing, we invited 16 students to write in four groups and examined how texts emerged and co-constructed over one semester. Student online activities were conducted outside of the classroom instruction. The Facebook logs, group essays, and interviews of eight active student-users were analyzed, triangulated, and interpreted.

With the aim of writing for pleasure, students were found to become more aware of their audience of the instructor, the teaching assistant, and two student-readers (non-group members) who browsed, and commented on their write-ups on Facebook. Meaning and the co-texts were negotiated and constructed. The four groups chose different topics for the collaborative task and revealed a trajectory of different developments of writer identities. The Facebook writing project has merged the elements of SNS functionalities, social learning, and writing development through such a collaborative task, with various degrees of participation (core or peripheral) from the members in the virtual community.

The project has shown the opportunities, through the Facebook activity design, of promoting autonomous learning within a structured language learning context. By extending informal out-of-class learning to help achieve the instructional goal which, traditionally, a structured formal classroom instruction can attain, it is argued that CALL once again sustains language learning effectiveness beyond the classroom boundary, and will blur the boundary of individual learning, collaborative work, and perhaps life by merging language use and learning.

2.5. Robotic learning of English for primary school students

Wen-Chi Vivian Wu

R-Learning (Robotic Learning) has been seen as a valuable new classroom resource for language instruction and has been shown by researchers to be more effective and produce better learning outcomes when compared with a similar computer-based activity. This advancement in the use of technology is worthy of study because students around the world are beginning to learn English at a younger and younger age. Much of the limited research, however, on Human Robotic Interaction (HRI) to date has not used a pedagogical framework that is theoretically sound, informed by research in instructional design, and at the same time has not been particularly useful to instructional designers, often lacking in research into English as Lingua Franca (ELF). Therefore, this study explored the potential for using teaching assistant robots in Taiwan’s elementary school classrooms for the instruction of English as a Foreign Language (EFL). In order to fully support the instructional design of the class and achieve desired learning outcomes, the researchers employed a conceptual framework based on three major theory-based teaching approaches to create an interactive learning environment for students that was engaging and entertaining, as well to enhance their learning experience: the framework included Communicative Language Teaching (CLT), Total Physical Response (TPR), and Storytelling, each incorporated into the databases that governed and managed moment-by-moment actions of the self-built robot, named PET (Powerful English Tutor). The CLT approach was used in the construction of databases for the teaching of self-introduction, conversation teaching, and teaching via storytelling. The TPR approach was applied in developing databases covering English character teaching, making use of entertaining body movements, singing, and dancing in order to help students internalize their lessons. The Storytelling approach was used in preparation of the databases for story teaching and learning.

To this end, the goal of this study, therefore, was to test a self-designed and self-built educational robot that could be programmed to act as a teaching assistant in order to accomplish multiple goals, such as fostering positive learning experiences and active learning of young students, motivating students to learn, and improving learning effectiveness. The study used an experimental group/control group methodology to explore (1) differences in learning outcomes as a result of using a Teaching Assistant Robot by comparing the experimental group and the control group, (2) differences in student motivation and interest in learning
English as a result of using a Teaching Assistant Robot, and (3) perceptions of the students and the instructor concerning the Teaching Assistant Robot. More details about findings are described in the study (Wu et al., in press) and finally, suggestions and potentials as well as some challenges for using self-built and self-designed teaching assistant robots for elementary teaching and learning are also discussed.

3. Conclusions

In this symposium, applications of Discussion fora, Facebook, wiki and weblogs, and robots are illustrated with instructional design to show the feasibility and success of CALL applications in five cases in Taiwan. We argue that CALL provides an optimal environment for task-based autonomous learning design in this Asian context. Through social networking sites, learner interaction is encouraged, with learning effectiveness enhanced. The studies are generally applicable in other ELF contexts. Limitations such as a small participant sample, and lack of a control group (except Wu’s) exist; however, class-based CALL studies in real-life teaching as one type of authenticity in the five studies warrant more exploration by other CALLers to apply our instructional designs to other ELF contexts in the future.

4. Acknowledgements

The presentation of five symposium members is financially supported by National Science Council (Taipei, Taiwan) under NSC102-2919-I-007-002-A1.

5. References


Research on the application of Intelligent Tutoring System (ITS) in English language teaching in China: Taking Jukuu English Essay Assessor (JEEA) as an example

Wulin Ma
Sichuan International Studies University
Chongqing, China

Abstract

Great achievements have been made in the research and practice of Intelligent English Essay Assessing throughout the world, with Juku English Essay Assessor (JEEA) being the most successful in China. Based on cloud computing and large-scale corpus, JEEA provides instant holistic scoring and general comments as well as sentence comments to students on their essays, and works by calculating similarities between their essays and standard English from corpus, which can help them improve their writing proficiency quickly. By analyzing the data from two different questionnaires and interviews, this paper found: (1) Both teachers and students like to use Jukuu to assess English essays; (2) Both teachers and students like sentence comments most; (3) Jukuu is more convenient than Criterion to use; (4) The biggest drawback of Jukuu is its inflexibility.

Keywords: Intelligent tutoring system (ITS); English writing; foreign language teaching; Jukuu English Essay Assessor (JEEA)

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1. Introduction

English writing is always a bottleneck for EFL learners: China has sponsored several College English Teaching Reforms, but it seems to have had little effect on improving students’ English writing. In 2008, the maximum possible score for CET4 (College English Test Band 4, a large scale English proficiency test for tertiary level non-English majored students in China) was 15 points, but the average score was only 6.19 (Jiang Yan & Ma Wulin 2011). English writing teachers and researchers have tried to explore English Essay Assessors to improve students’ writing. So far as we know, these include Project Essay Grade (PEG), E-rater & IntelliMetric, and Intelligent Essay Assessor (Landauer, Latham & Foltz 2003). The specific examples are My Access!, Criterion, Writing Roadmap, and Jukuu (Figure 1).
Jukuu, developed by Beijing University of Posts and Telecommunications (China), is based on corpus and cloud computing, and works by calculating similarities between students’ essays and standard English from corpus (Figure 2). Jukuu provides instantaneous holistic scores and general comments, as well as sentence comments on students’ essays.

This paper tries to use Intelligent tutoring system (ITS) theory to explore the way Jukuu English Essay Assessor is being applied to improve students’ writing proficiency. By analyzing data from 2 questionnaires and interview, this article shows us people’s acceptance of Jukuu and its remaining drawbacks.
2. Method

2.1. Research question

Is Jukuu a good English essay assessor that is fully accepted by both teachers and students? Why?

2.2 Questionnaires

Two different questionnaires were carried out in the early June, 2013. 44 students and 13 teachers completed these two different questionnaires. All data from questionnaires was qualified. The questionnaires aimed to explore both students’ and teachers’ attitudes towards Jukuu and its reasons.

2.3 Interview

Interviews aim to gain a deep understanding about Jukuu that cannot be obtained via questionnaire.

3. Discussion

3.1 Is Jukuu useful for improving students’ writing proficiency? Why?

Table 1: Jukuu is useful to improve students’ writing proficiency

<table>
<thead>
<tr>
<th></th>
<th>Very useful</th>
<th>Useful</th>
<th>A little useful</th>
<th>Not useful</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>31%</td>
<td>69%</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Students</td>
<td>2%</td>
<td>77%</td>
<td>5%</td>
<td>16%</td>
<td>0</td>
</tr>
</tbody>
</table>

From Table 1, we know that both teachers and students think Jukuu is useful in improving students’ writing proficiency. For teachers, 100% of them think it is useful, while for students, 79% of them agree strongly that Jukuu is useful in improving their writing proficiency.

There are several reasons: firstly, because they have too many students, English writing teachers cannot assess students’ essays frequently, and according to the survey, more than 54% of teachers take classes of more than 150 students at a time. In addition, 39% of teachers only assessed two essays when the survey was carried out. 23% teachers assessed three essays when the survey was carried out. Twenty-five Year Two students (57%) had been taught English language for four semesters, whilst 19 Year One students (43%) had been taught for two semesters when the survey was carried out. Student surveys revealed that their teacher assessed only one essay each semester. Because of Jukuu, 23% students were asked to accomplish two essays, while 46% students were asked to accomplish three to four essays in one semester: 77% teachers will reassess students’ essays briefly after Jukuu. Secondly, Jukuu has its own advantage compared with a teacher’s assessment, as it can provide instant feedback on students essays, so that students can modify their essay as soon as possible until they are satisfied with it. Finally, Jukuu can help students to form an e-portfolio, which can help students to be aware their achievements.

3.2 What function provided by Jukuu do participants like most? Why?

Jukuu has many functions, such as general scores and specific scores (including vocabulary, sentence, passage structure and content), detailed essay reports, detailed trace of each modifying edition, teachers’ webpages, BBS and comments sentence by sentence (Figure 3). 64% teachers as well as 59% students regard sentence comments (including hints of wrong sentences/misspellings/Chinglish, advice for modifying frequently used phrases, statistics of the collocation as well as grammar checking, etc.) as the most useful function. 16% students also think general comments are also useful. Students modify their essays according to the sentence comments.
3.3 What is the difference between Jukuu and Criterion?

Both Jukuu and Criterion have the same function in assessing students’ essays: their most important feature is sentence comments, from which students benefit greatly. A feature of Jukuu is that it is based on Web2.0 and cloud computing, so that teachers and students can visit Jukuu via computers, tablets and mobile phones to assess students’ essays or to accomplish assignments. In fact, compared with Criterion, Jukuu is quite convenient for teachers and students to use. Jukuu, based on corpus, has other advantages. First of all, it provides teachers with personal webpages that can be used to upload sample essays for students to imitate, or to recommend excellent essays written by students themselves as models. Those whose essays were recommended as models were encouraged to write more, while other students can also learn from their classmates. Finally, personal webpages allow teachers to submit high-quality writing materials for students to download.

3.4 What are the disadvantages of Jukuu?

Jukuu, as an Intelligent English Essay Assessing Tutoring System (IEEATS), has its drawbacks. Both teachers (as high as 77%) and students (70%) think Jukuu is too inflexible, while language itself is extremely flexible. 69% teachers think Jukuu does not sometimes detect major grammar and logic errors, while 60% students disagree on ‘possible Chinglish’ hints.

4. Conclusions

Even though Jukuu has its own drawbacks, as mentioned in 3.4, both teachers and students think Jukuu is a good English Essay assessor. Right now, Jukuu is trying to modify its function everyday with the help of many Chinese writing teachers.

This research has its own shortcomings: firstly, the sample is not large enough. Secondly, even though researchers (Gu Chenghua & Wang Li 2012, Shi Xiaoling 2012) found that Jukuu can improve students’ writing proficiency, this research did not verify this point.

Jukuu can help teachers to assess students’ essays, but it has its drawbacks, so teachers have to reassess students’ essays after they have been assessed by Jukuu. Only in this way can students’ English writing be improved quickly. Jukuu, developed very quickly, is the most successful Intelligent English essay assessor, which is a localized CALL practice. Localization is one way to make ICALL progress.

5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Improving the grammatical competence of Spanish university EFL students: Design and implementation of a web-based learning system.

Penny MacDonald
Universitat Politècnica de València
Valencia, Spain

Michael O’Donnell
Universidad Autónoma de Madrid
Madrid, Spain

Abstract

Online language learning systems in general need to cater to potential users from a wide-range of mother-tongue contexts. Learners from a particular mother-tongue background may find some of this material unnecessary, where the concepts involved can be easily transferred from their mother tongue. Additionally, aspects of the target language that are difficult for the particular mother tongue may be under-catered to. This paper will explore a methodology for using learner corpora to discover exactly what grammatical concepts are most critical for a language learner of a particular learning context, and explain how this information is being integrated into an online grammar learning system currently being developed.

An additional problem is that even learners from a similar learning context are not identical: they may be at different points of the learning process, or may have different learning styles. The learning system needs to be able to adapt to the individual’s needs: firstly, identifying the concepts which the learner has already mastered, and those yet to be mastered, and thus steering the learner towards those grammatical concepts that are most critical for the learner at the current point of their personal linguistic development. This paper describes the system being developed, which selects the reference material and quiz questions for the individual learner that are most critical to the learner.

Keywords: web-based learning systems; grammar teaching/learning; error analysis; adaptive systems.

1. Introduction

From the beginning of the Bologna Process in 1999 until the creation of the European Higher Education Area ten years later, Spanish universities have made the necessary reforms, to both undergraduate and post-graduate courses, in order to make them more comparable, compatible, and coherent with those of other European countries. At the present moment, there are several on-going research projects in the field of foreign language teaching and learning in Europe that centre on the adaptation of study plans and curricula to the Common European Framework of Reference for Languages (CEFR). One such project, TREACLE (Teaching Resource Extraction from an Annotated Corpus of Learner English), is carrying out a detailed revision of the grammatical
skills of students studying English at Spanish universities in order to ensure quality teaching which is more efficient and tailored to meet the students’ needs.

A key concept of the TREACLE approach is that, while proficiency in a language requires the mastery of many thousands of grammatical concepts, many of these concepts are easily acquired, directly transferable from the mother tongue, particularly where the languages involved are related. For instance, while contexts of use differ, both English and Spanish share passive versus active voice, perfect and progressive aspect formed via auxiliary verbs, use of relative clauses, etc.

Online CALL systems aimed at a general market need to address the most general problems that learners from a range of mother tongue backgrounds might face. So learners need to spend time on these problems, even if the concepts involved are not problems for the particular learner currently in front of the screen.

The central philosophy of the TREACLE project is to identify exactly the key grammatical concepts that trip up English learners of a particular language background, and focus teaching effort on those concepts. Because we are teaching within Spanish universities, we are focusing on identifying those grammatical concepts that cause Spanish University-level learners of English to produce errors in their language use.

2. Discovering the critical problems of a learner base

The first stage of our project has been one of charting what exactly the problem areas faced by the target group of English learners are. To this end, we have followed a two-pronged approach: analysing the errors of our learners (to see what they do wrong), and analysing a parsed corpus of their writings (to see what structures they produce, and which they avoid).

Firstly, we have error-annotated a corpus of texts produced by Spanish University learners of English, identifying 16,000 errors in 300 student essays (approximately 110,000 words of text). The errors include errors of vocabulary, grammar, pragmatics and punctuation, although we will focus here on the 7,400 identified grammatical errors (MacDonald et al. 2011).

Close examination of the list of grammatical errors tells us what problems our learners do face in their writing (and thus that need to be addressed by an online system), and, taking frequency into account, how much emphasis the online system should give to each problem. If we compare our list of errors ordered by decreasing frequency to the general content of EFL materials (both online and on the printed page), we find that the existing EFL materials give far more weight to phenomena that our students do not have problems with, and give little weight to problems that the students do recurrently stumble over. For example, 20% of our grammatical errors involve either including an article before a noun when it is contextually inappropriate, or not including it when it should be. However, existing EFL materials do not in general spend a great deal of time teaching the rules behind this phenomenon.

The syntactic parsing of our corpus is also important here, as learners may avoid making errors in a structure by avoiding the structure completely. By charting the degree of use of the syntactic structures of students at each proficiency level, and comparing this degree of use to that of a comparable native corpus, we can identify where students are underusing structures that they should perhaps be using. Part of our work has involved using our parsed corpus of student writings (each assigned a proficiency score using the Oxford Quick Placement Test) to assign an order of difficulty to the structures recognised by the parser, and thus to give us information as to the order in which grammatical concepts should be delivered in an online system (see O’Donnell, 2012).

3. Designing an online learning system responsive to individual abilities

The second stage of our project, one which we are currently implementing, is the construction of a web-based grammar learning environment which focuses on the key concepts identified by our corpus study, not on other concepts which have not given our learner base substantial problems. The system is designed around the idea of “1000 concepts”, a listing of the 1000 most critical grammatical concepts that our learners need to learn. Each of these concepts is linked to its level of difficulty (as determined by the corpus research), and also linked to explanatory material, and a number of quiz questions.

Each learner within the system is given an initially blank learner model. The learner model records, for each critical concept, the degree of assimilation of the concept, and the system’s degree of certainty in this
assessment. As the student interacts with the system, accessing reference material about a concept, or answering quiz questions related to the concept, the system updates both the assimilation level, and the degree of certainty.

The idea of the system is that when a learner interacts with it, the system selects topics of study and quiz questions based on that student’s learner model, focusing the work of the student on those concepts that are most critical to them at the current point in their learning development. The most critical concepts are exactly those that the student has not yet assimilated which have the lowest level of difficulty.

To avoid learners being lead through concepts that are scattered across the grammar curriculum, the critical grammatical concepts are organised into topical sets. Students can select any topic for study, although the list of topics is displayed with those topics they have mastered in dark blue, those yet to be mastered in grey, and those which are critical to them just now shown in red. Students are thus directed to the topics that they are most open to learn at this point of their development. And within a topic, the system presents quiz questions to firstly assess their state of learning, and later, to push forward those concepts which the system judges most critical for the learner.

4. References


Factors that determine CALL integration into Modern Languages Courses in Brazil

Claudia Beatriz M. J. Martins
UTFPR/PPGTE/DALEM
Curitiba, Brazil

Herivelto Moreira
UTFPR/PPGTE
Curitiba, Brazil

Abstract

The relevance of technology/CALL in foreign language (FL) teaching is undeniable. However, as in other areas of education, its integration has not occurred as expected. It is still a problem without a definitive solution. The objective of this paper is to report the results of a study on CALL integration into the classrooms of universities and colleges of the state of Paraná, Brazil. The research was conducted with 270 FL teachers from 33 Modern Languages Courses and tried to determine what makes these teachers integrate CALL. The theoretical framework used was the Spherical Model of L2 Teachers’ Integration of CALL Technology into the Classroom. This model synthesizes previous findings on the integration of CALL and considers that there are three sets of factors that represent the essence of this integration: CALL technology education, teachers’ individual factors and contextual factors. A quantitative methodological approach was employed to collect data and a survey questionnaire was also developed. The use of technology in the classroom was not considered as a unitary construct, but rather multifaceted, to avoid analytical constraints in cases where teachers use technology for different instructional purposes. Statistical analyses were performed to examine the relationship between the three sets of factors from the Spherical Model and the multifaceted uses of technology by teachers. Results showed that while individual factors and contextual factors are important predictors of the four uses of technology, prior technology education experience did not emerge as significant.

Keywords: CALL integration; CALL teacher education; CALL Spherical Model

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1. Introduction

The relevance of CALL in foreign language (FL) teaching is undeniable. However, as in other areas of education, the integration has not occurred as expected (Gillespie, 2008; Hegelheimer, 2006). In general, CALL is of secondary importance in classroom settings, being used to provide additional activities or complement instruction. True and meaningful integration is still in its early stages in several educational institutions (O’Bryan & Hegelheimer, 2007). We are still quite far from Bax’s (2003) normalisation stage or Integrated CALL phase, i.e., when CALL is invisible and embedded in everyday practice.
Integration is a complex issue that involves multiple variables. Yet, the teachers play an important role since they determine whether or not the use of CALL will occur (Hubbard, 2008; Kern, 2006). And this decision is influenced by several factors, i.e. teacher education, age, and context, among others. Although several researchers mention these factors, there are no specific and comprehensive models in CALL to study the integration of technology in the classroom by FL teachers (Hong, 2009).

The Spherical Model of L2 Teachers’ Integration of CALL Technology into the Classroom was developed by Hong (2009) to try to meet this need. The model synthesizes previous findings on the integration of CALL and shows that there are three sets of factors that represent the essence of this integration: CALL technology education, teachers’ individual factors and contextual factors. The model itself does not answer what determines CALL integration. However, it provides the necessary elements so that a detailed analysis can be conducted. This was the framework that guided this research.

The objective of this paper is to report the results of a study on CALL integration into the classroom of universities and colleges of the state of Paraná, Brazil. The research was conducted with FL teachers from Modern Languages Courses and tried to determine what makes these teachers integrate CALL.

2. Method

This study employed a quantitative methodological approach to collect data and a survey questionnaire was developed based on the elements from Hong’s (2009) Spherical Model. The use of technology in the classroom was not considered as a unitary construct, but rather multifaceted, to avoid analytical constraints in cases where teachers use technology for different instructional purposes. Statistical analyses were performed to examine the relationship between the three sets of factors from the Spherical Model and the multifaceted uses of technology by teachers.

2.1. The questionnaire

The development of the questionnaire involved several steps (Figure 1). Since it was based on English questionnaires, special attention was given to the translation process.

![Flowchart of the process of development of the questionnaire](image)

The result was an instrument with 110 items and 6 parts: Use of technology; Beliefs and attitudes towards the use of computers/technology for language teaching; Digital literacy; Prior experience: Use of computer/technology; Technology environment in the institution; and Demographic variables. Parts 1, 2 and 3 use 5-point Likert-type scales.
2.2. Data collection / The participants

The process to determine the population took three months (October/December-2012). Data collection started in December 2012 and finished in March 2013. A total of 270 FL teachers from 33 institutions participated in the study. The response rate was 56% (152).

2.3. Data analysis

We used inferential statistics and multivariate analysis methods as well as descriptive statistics to analyse the data. Parametric (Tukey’s) and nonparametric tests of significance were performed (Chi-square, Kruskal-Wallis). We also estimated a series of logistic and linear regression models.

The internal consisten
cy of Parts 1, 2 and 3 of the questionnaire was confirmed by high values for Cronbach’s alpha. The Mahalanobis distance—used for multivariate outlier detection—showed no outliers (an observation that deviates very much from other observations) for these three parts, which could lead to incorrect results. For Part 1—the dependent variables—we performed factor analysis and the results revealed a four-factor solution: Technology for Delivering Instruction (TDI); Technology for class preparation (TCP); Student use of Technology to Perform Tasks (STPT); Student use of Technology during Class Time (STCT).

3. Discussion

The results from Part 1 showed that TCP use is the highest. Activities such as creating tests, doing research for classes, etc., using the computer are close to Bax’s (2003) normalisation. Integration in this case is almost complete. STCT use appeared as the lowest. This means that teachers rarely or never ask their students to use technology. So, their students—future FL teachers—make little or no use of technology in class during their pre-service years (four years in Brazil).

The percentage of teachers who had prior experience of technology education during the pre- and in-service periods was low (Table 1):

Table 1: Teachers’ prior experience of technology

<table>
<thead>
<tr>
<th></th>
<th>CALL courses</th>
<th>General technology courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-service period</td>
<td>9.8%</td>
<td>17.7%</td>
</tr>
<tr>
<td>In-service period</td>
<td>30.2%</td>
<td>36.1%</td>
</tr>
</tbody>
</table>

CALL/general technology courses taken in the in-service period influenced only the TCP use. However, due to the small number of respondents in this part, further investigation is necessary about this and the other inferences obtained from Part 4. This small number also shows that formal preparation is not responsible for teachers’ digital literacy (M=100.8, SD=17.4).

It was not possible to determine if the technological climate of the institution influenced the uses of technology, because of the small number (M=4.6) of teachers in each institution and the low percentage of prior technology education experience.

Attitude and digital literacy appeared as important predictors to consider with regard to the four uses of technology.

4. Conclusions

In this brief paper we could only provide some findings of the research. However, it is important to note that the study of the multifaceted uses of technology allows us to have a better understanding of CALL integration and provides more possibilities of finding answers. The results on teachers’ prior technology education have important implications for future research. There is also the need to examine more deeply why teachers do not
ask their students to use technology, since they make use of it for class preparation. Finally, considering the response rate was 56%, we need to be cautious about making generalizations.

5. References


Hegelheimer, V. (2006). When the technology course is required. In P. Hubbard, & M. Levy (Eds.), *Teacher education in CALL* (pp. 117-133). Amsterdam: John Benjamins.


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Webtv and webradio to improve production in L2: An experimental study in Italian L2

Eugenia Mascherpa
University of Calabria
Cosenza, Italy

Anna De Marco
University of Calabria
Cosenza, Italy

Abstract

This contribution presents the preliminary results of an experiment conducted with foreign students learning Italian as L2 using a VLE (Virtual Learning Environment) in an academic setting. The case study focuses on the development of oral skills (both receptive and productive) of foreign students through the use of media education tools such as Webtv and Webradio. Students are encouraged to cooperate in building up their language skills in an emotionally safe and play oriented context (Downes, 2010; Cross, 2006).

In agreement with the European Framework, where the focus of language speaking skills revolves around different communicative situations, we addressed the choices of students in projects including the oral presentation of news, surveys, etc., and interactional tasks such as cartoons, debates and interviews. The research stages were divided into three parts: (1) creation of programme schedules; (2) realization of programmes and their broadcast; (3) learners’ perceptions on their progress in the oral skills to be achieved through the use of questionnaires.

Results show an improvement in the oral skills of the students for the production of monologues and dialogues. In particular, improved fluency has been evaluated with respect to the following descriptors: hesitation flow, reformulations and pauses, speech rate, and repairs. Data have been also evaluated by native speakers to reduce the amount of subjectivity. Evaluations by native speakers confirmed the acoustic analysis of non-native productions.

Keywords: Webtv; webradio; fluency; collaborative learning

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1. Introduction

In this study we sought to investigate whether involving students in an spontaneous task in language teaching can improve the degree of naturalness and fluency in learners of Italian in order to fulfill their academic needs. During their university examination they are required to give mainly oral examinations. The use of Webtv and Web Radio instruments stimulated students to work in a totally autonomous setting since they had to program their own schedule, the topic and the organization of the TV or Radio broadcast. Furthermore, the broadcasts realized by the students give a picture of their proficiency and accomplish two main functions: (1) a starting point for the self evaluation of the student in a following course; (2) The material on the basis of which it is
possible to refine the evaluation indicators of fluency in oral production.

Our main objective was to involve learners in tasks that would encourage them to speak in a low anxiety setting and to express themselves freely and as naturally as possible. In particular, on the one hand we wanted to assess whether the Web tasks had a positive effect on the fluency and naturalness of students’ speech, while on the other, we attempted to see if fluency measures were confirmed also by native perceptual evaluation.

2. Methodology

The group involved in the Webtv and Webradio activity included six students: five Indonesian and one Spanish. The experiment lasted four weeks, for a total of eight hours of meetings at the Computer Laboratory.

We provided a pre-task phase with a discussion forum on Facebook. The discussions were decision-making oriented: how to organize the activity, the script of their program and so on. During the next phase, run on the web, students planned and reviewed the program with the peer group and the teacher. In the post task phase, which took place in the lab, students implemented the program. They freely chose the topic of their program and the teacher helped them on line to improve it linguistically and structurally.

All programs provided an opening and an ending with opening titles and closing credits, assembly of the scenes, screenplay and soundtrack. The students involved always worked as a team.

The acoustic analysis was run on students’ productions before the experimental phase (on conversations face to face), and on their Web performances. Both production analyses were double checked with the evaluation of a speech perception test of students’ productions by native speakers of Italian. In order to evaluate whether the activities the students were engaged in had positive effects on their involvement in their oral production they completed a questionnaire addressing their experience.

3. Discussion

The outcome of students’ reported experience was positive: they enjoyed the activities and felt a general linguistic improvement. The tools they liked most were Facebook (in particular, due to ease of access and familiarity with the social network) and the Webtv. They all perceived the task as a means to improve their autonomy in language learning.

Learner performance was individually examined both for conversation face to face on general topics (task 1) and for the Webtv and Webradio task (task 2), calculating for each learner the length, the number and location of breaks (over 0.2 sec.), the speech rate and the articulation rate.

To obtain comparable data, statistical analyses were conducted. We calculated the average of the speech rate and articulation rate values of each performance. The articulation rate included the length of pauses longer than 0.2 sec. We excluded the lowest and the highest values from the calculation of the average, in order to obtain more homogeneous data. Results have been summed up in the following table:
Table 1: Learners’ fluency values for the two tasks

<table>
<thead>
<tr>
<th></th>
<th>SP.RATE</th>
<th>ART.RATE</th>
<th>RAPP.</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEDHA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>task 1</td>
<td>0.621</td>
<td>0.462</td>
<td>1.344</td>
</tr>
<tr>
<td>task 2</td>
<td>0.367</td>
<td>0.326</td>
<td>1.125</td>
</tr>
<tr>
<td>DIANA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>task 1</td>
<td>0.24</td>
<td>0.174</td>
<td>1.379</td>
</tr>
<tr>
<td>task 2</td>
<td>0.182</td>
<td>0.157</td>
<td>1.159</td>
</tr>
<tr>
<td>PRISKILA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>task 1</td>
<td>0.588</td>
<td>0.444</td>
<td>1.324</td>
</tr>
<tr>
<td>task 2</td>
<td>0.308</td>
<td>0.275</td>
<td>1.12</td>
</tr>
<tr>
<td>MEGA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>task 1</td>
<td>0.502</td>
<td>0.457</td>
<td>1.098</td>
</tr>
<tr>
<td>task 2</td>
<td>0.269</td>
<td>0.248</td>
<td>1.084</td>
</tr>
<tr>
<td>ARI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>task 1</td>
<td>0.622</td>
<td>0.484</td>
<td>1.285</td>
</tr>
<tr>
<td>task 2</td>
<td>0.261</td>
<td>0.236</td>
<td>1.105</td>
</tr>
</tbody>
</table>

Each student revealed significant improvements. Their performances showed a reduced number of breaks and an increase in the speed of speech.

Table 2 summarizes the overall performances for both tasks:
Table 2: Speech rate/art. rate average values

<table>
<thead>
<tr>
<th></th>
<th>SPEECH RATE</th>
<th>ART. RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>task 1</td>
<td>0.498</td>
<td>0.394</td>
</tr>
<tr>
<td>task 2</td>
<td>0.305</td>
<td>0.271</td>
</tr>
</tbody>
</table>

In order to verify learners’ improvements from a perceptual point of view, we submitted two tests to a sample of judges. The tests contained task 1 and task 2 performances respectively; judges were asked to give an evaluation on the degree of fluency and naturalness. We summarize data obtained in the two tables below:

Table 3: Degree of fluency (%)

<table>
<thead>
<tr>
<th></th>
<th>NOT VERY FLUENT</th>
<th>SUFFICIENTLY FLUENT</th>
<th>VERY FLUENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>TASK1</td>
<td>46.83%</td>
<td>48.16%</td>
<td>2.3%</td>
</tr>
<tr>
<td>TASK2</td>
<td>22.22%</td>
<td>33.33%</td>
<td>37.88%</td>
</tr>
</tbody>
</table>

Table 4: Degree of naturalness

<table>
<thead>
<tr>
<th></th>
<th>NOT NATURAL</th>
<th>VERY</th>
<th>SUFFICIENTLY NATURAL</th>
<th>VERY NATURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>TASK1</td>
<td>62.83%</td>
<td>37.16%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>TASK2</td>
<td>27%</td>
<td>52.33%</td>
<td>20.55%</td>
<td></td>
</tr>
</tbody>
</table>

Tables 3 and 4 show that task 2 performances obtained a very positive evaluation, scoring a high percentage of fluency and naturalness. On the other hand, task 1 performances were considered less fluent and natural.

4. Conclusions

Considering the results of both the acoustic and the perceptual data, all learners have improved their fluency. The practice and the reflection on speech, offered by the use of Web technologies, had a positive effect on the prosodic level of students’ production. The research showed in particular that Webtv gave the students the opportunity to act in a play-oriented environment and to produce creative team work. We can assume a systematic use of Webtv laboratory activities as contiguous to courses of Italian L2 with the aim of creating a permanent editorial staff that offers students the opportunity to practice language and, at the same time, to institutionalize a space that is an expression of a multicultural perspective at the University of Calabria.

5. References


Tabletop computer: An agency for ESL collaborative reading

Jaber Ali Maslamani  
Newcastle University  
Newcastle upon Tyne,  
United Kingdom

Scott Windeatt  
Newcastle University  
Newcastle upon Tyne,  
United Kingdom

Abstract

Little research has been carried out on the potential for language learning of multi-touch tabletop computers, which allow two or more users to interact simultaneously with the computer. This paper presents the results of a study of a collaborative strategic reading task carried out using a tabletop computer, focusing in particular on the role of scaffolding. Scaffolding as a means of enabling learners to achieve a goal or a level of understanding they might not have been able to achieve on their own has been investigated in teacher-student and student-student interaction, but there has been no detailed linguistic analysis of multimodal interaction during collaborative reading using a tabletop computer.

Keywords: scaffolding; tabletop computer; collaboration; CALL; collaborative reading

1. Introduction and background

Recent research has witnessed an increase in the number of research studies on the use of tabletop technology to promote collaboration and collaborative learning (Hornecker et al., 2008; Rogers et al., 2008; Kharruffa, 2010). The tabletop computer is a platform that allows collaborative learning through learner-learner interaction at the same time as learner-computer interaction. ‘Collaborative learning’ can be defined as “the instructional use of small groups so that students work together to maximize their own and each other’s learning” (Johnson & Johnson, 1996, p. 786). This paper will report ways in which multimodal peer scaffolding is manifested when language learners work on a task in groups around the tabletop computer. The sociocultural context, in which this research is situated, can provide opportunities for learning when attributes of the tabletop computer interact with attributes of other interacting elements, in this case, the students. The multimodal element refers to the fact that students can interact with each other, and with the tabletop computer, which can accept inputs simultaneously from more than one student.

The study has been motivated by four main factors: (1) ample positive results relevant to the use of CALL materials, (2) increased interest in the use and implementation of technology in teaching and learning, (3) the authors’ interest in investigating the potentials of tabletop computers, as an emerging technology, for
collaborative language learning, and (4) the fact the tabletop computer is largely under-researched and probably missing from CALL research.

Participants used the Digital Collaborative Strategic Reading (DCSR) application on the tabletop computers in groups of four, for five sessions. Data were collected using audio and video recordings of students’ collaborative work and of on-(tabletop)screen actions. Data analysis revealed four main types of scaffolding behaviours: verbal, non-verbal, simultaneous verbal and non-verbal behaviours, and system scaffolding.

The results of a multimodal analysis of language and gesture data and tabletop artefacts will be of value to language teachers, developers of tabletop software for language learning, and researchers interested in tabletop-based language learning and interaction.

2. DCSR

2.1. What is DCSR?

Digital Collaborative Strategic Reading (DCSR) is a CALL tool designed to provide multi-strategic and systematic instruction on and practice with collaborative reading on tabletop computers. Students go through a number of digital reading stages: previewing, brainstorming, prediction, click and clunk, get the gist, and wrap-up. DCSR is rooted in the Collaborative Strategic Reading (CSR) approach, a recent teaching approach, adapted from reciprocal teaching of Palincsar & Brown (1984), that emphasises enhancement of reading comprehension through collaborative group work and strategic reading procedures (Klingner & Vaughn, 1998, Klingner et al., 1998, Klingner & Vaughn, 1999, Vaughn and Klingner, 1999, and Vaughn et al., 2001). CSR was chosen as the focus for this study as it was originally designed to offer instruction of explicit specific strategies and ‘clearly specified procedures’ for language learning in general and reading comprehension in particular.

2.2. Stages of DCSR

DCSR involves a number of stages; in the first stage, the students are given a preview of the text. In the second and third stages, they are encouraged to brainstorm about the subject generally and then predict what the document will contain. In the next stage, they can identify unknown words from within the text, one paragraph at a time. The unknown words are then collaboratively examined by the group of four using various digital strategies such as (1) showing a sentence containing unknown words, (2) showing the sentences before and after that containing unknown words, (3) breaking words down into prefixes, suffixes, and roots, (4) breaking words into smaller meaningful parts (derivatives), and (5) obtaining an on-screen dictionary definition. The participants then write down the gist of the paragraph. Once all the paragraphs are viewed, the final (wrap-up) stage requires the participants to generate questions to summarize what they have learned.

![Figure 1: Stage 1 of DCSR, Previewing](image)
Figure 2: Stage 2, Brainstorming

Figure 3: Stage 3, Prediction

Figure 4: Stage 4, Click and Clunk

Figure 5: Stage 5, Get the Gist
3. Method

3.1. Data Collection

The paper addresses two questions: (1) What is the nature of the scaffolding provided by learners during the collaborative reading task? (2) What scaffolding can the tabletop computer provide? Students’ interaction around the tabletop computer was video-recorded using two cameras from both widths of the tabletop (see Figure 7). It was also audio-recorded in case the audio recorded by the cameras was inaudible for any reason.

Figure 7: Students are Interacting with Each Other and with the Tabletop Computer.

Tabletop screen activities were recorded as well, using ‘Snag It’ software that was able to record and save what digital tools students used while doing the reading task (see Figure 8).

Figure 8: Recording of the Activity on the Tabletop Computer Screen

3.2. Transcription

Transcription of the videos went through two stages: (1) transcribing spoken language into text, and (2) incorporating video stills of non-verbal (see Figure 7) and on-screen actions (see Figure 8) with the transcription of spoken language. Video stills of non-verbal behaviour were temporally aligned with spoken language. Sometimes, video stills were added to the written description of non-verbal behaviour.
3.3. Data Analysis and Findings

The study adopted a grounded theory approach to data analysis. The recorded data were analysed for scaffolding tools and how these tools were used for mediating language learning. The analysis revealed four types of scaffolding tools: verbal tools, non-verbal tools, simultaneous verbal and non-verbal tools, and system tools. Such tools had varieties of communication actions such as, but not limited to, giving definitions, comprehensions checks, using L1 (first language), and giving feedback.

4. Final remarks

From a sociocultural view of learning, the study explored learning opportunities that emerged from students’ collaboration with peers and with the tabletop computer. The data gathered included video recordings of students’ group work around the tabletop technology. This multi-level interaction, i.e. learner-learner interaction as well as learner-computer interaction led to various scaffolding instances that led to learning opportunities. The study revealed various scaffolding tools that were employed by students in different ways. The utilization of different scaffolding tools was of great importance in facilitating co-construction of knowledge and the development of language.

It is hoped this study will broaden researchers’, teachers’, and CALL material designers’ understanding of the nature of interaction around this emerging technology, the tabletop computer, and of how this interaction may contribute to language learning.

5. Design and development of DCSR

DCSR is designed by Jaber Ali Maslamani, a PhD student of Applied Linguistics, Newcastle University, and developed by Phil Heslop, a senior computing officer, Culture Lab, Newcastle University.

6. References


Abstract

The present study tracked fluency development in 53 beginning-level learners of Japanese over one year in order to examine (RQ1) how fluency measures change over one year, (RQ2) which complexity factors are correlated with each fluency measure, and (RQ3) whether or not L1 has any effect on L2 fluency development. Speaking assignments were collected from English- and Chinese-speaking learners enrolled in first year Japanese courses at a university in the U.S. Four speaking assignments (monologues) were submitted over one year (twice per semester) using an online speaking practice/assessment system called Speak Everywhere. Four speed-related, five breakdown-related, and three repair-related fluency measures were examined following previous studies (Ginther, Dimova, and Yang, 2010; Saiki et al., 2006). As for RQ1, the results of one-way repeated measures ANOVA revealed that the fluency measures did not improve in the course of learning as expected from our previous study (Hirotani, Matsumoto, & Fukada, 2012). For RQ2, this study was able to identify complexity factors affecting the three types of fluency measures. For RQ3, two-way MANOVA and two-way repeated measures ANOVA found that there were no differences in fluency development between American and Chinese learners of Japanese, although mixed model analyses revealed that each L1 group had different complexity factors putting pressure on the fluency measures.

Keywords: fluency development; longitudinal; online speaking practice; Japanese

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1. Introduction

Previous studies on fluency generally agreed that more proficient learners tend to produce a greater amount of output in a given time (Lennon, 1990; Riggenbach, 1991) and fewer pauses within a meaningful language unit (e.g. Ishizaki, 2004; 2005). It was also found that learners’ L1 affects their L2 pausing patterns (Riazantzeza 2001). Ellis (2009) showed that fluency does not develop in a linear fashion due to trade-offs among fluency, accuracy and complexity. Skehan (2009) claimed the use of new words is a potential disfluency factor. Hirotani, Matsumoto, and Fukada (2012), in their 20-week developmental study using monologues, also found that fluency fluctuated due to complexity factors like new words. A gap in this area of research is a longer term longitudinal study that takes learners’ L1 into consideration. The purpose of the present study is to examine:
how fluency measures change over one year, (2) which complexity factors are correlated with each fluency measure, and (3) whether or not L1 has any effect on L2 fluency development.

2. Method

2.1. Participants

The participants were 53 students enrolled in first-year Japanese courses at a university in the U.S. 16 of them were native English speakers (EN) and 37 were native Chinese speakers (CH). All the participants completed the first-year two-course sequence, lasting for 10 months.

2.2. Materials

Four monologues were collected using an online oral practice/assessment platform called Speak Everywhere. The topics were my day, my town, my hobby, and my family.

2.3. Measures

Three aspects of fluency were examined: speed, breakdown, and repair. Four indices of speed fluency and five indices of breakdown fluency were adapted from Ginther, Dimova, and Yang (2010): Speech Time Ratio, Speech Rate, Articulation Rate, Mean Run Length, Mean Silent Pause Time, Mean Silent Pause Time within AS Units, Mean Silent Pause Time between AS Units, Silent Pause Ratio, and Filled Pause Ratio. For repair fluency, following Saiki, Liu, Wu and Tsuchiya (2006), Number of Repetitions, Number of Self-Corrections, and Number of Stutters were adopted.

2.4. Data Analysis

All the fluency data were retrieved from collected audio files and manually typed transcripts of the monologues through Pratt (Boersma & Weenink, 2011), a computer program for speech analysis, Mecab (Kudo, 2011), a Japanese morphological analyzer, and custom-written PHP scripts. Among the fluency measures, Filled Pause Ratio was excluded because its low frequency of occurrence prevented statistical analysis. One-way repeated measure ANOVA and two-way MANOVA were used to answer RQ1, the mixed model approach to answer RQ2, and two-way repeated measures ANOVA for RQ3. The complexity factors in this study were New Words, New Structures, Sentence Length, and Sentence Complexity.

3. Discussion

3.1. Research Question 1

Table 1 shows means of the fluency measures in Task 1 to Task 4.
Table 1: Means of Fluency Measures and Results of one-way repeated measures ANOVA

<table>
<thead>
<tr>
<th>Task 1 (Ch3)</th>
<th>Task 2 (Ch5)</th>
<th>Task 3 (Ch7)</th>
<th>Task 4 (Ch10)</th>
<th>ANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN</td>
<td>CH</td>
<td>EN</td>
<td>CH</td>
<td></td>
</tr>
<tr>
<td>Speech Time Ratio</td>
<td>.638</td>
<td>.659</td>
<td>.704</td>
<td>.721</td>
</tr>
<tr>
<td>Both Groups</td>
<td>.653</td>
<td>.716</td>
<td>.674</td>
<td>.652</td>
</tr>
<tr>
<td>Both Groups</td>
<td>3.176</td>
<td>3.757</td>
<td>3.443</td>
<td>.322</td>
</tr>
<tr>
<td>Articulation Rate</td>
<td>4.890</td>
<td>4.856</td>
<td>5.489</td>
<td>.155</td>
</tr>
<tr>
<td>Both Groups</td>
<td>4.866</td>
<td>5.256</td>
<td>5.078</td>
<td>.510</td>
</tr>
<tr>
<td>Mean Run Length</td>
<td>7.192</td>
<td>7.343</td>
<td>10.16</td>
<td>7</td>
</tr>
<tr>
<td>Both Groups</td>
<td>7.298</td>
<td>9.524</td>
<td>9.238</td>
<td>.874</td>
</tr>
<tr>
<td>Mean Silent Pause Time</td>
<td>.641</td>
<td>.575</td>
<td>.525</td>
<td>.481</td>
</tr>
<tr>
<td>Both Groups</td>
<td>.595</td>
<td>.495</td>
<td>.637</td>
<td>.632</td>
</tr>
<tr>
<td>Mean Silent Pause within AS Units</td>
<td>.847</td>
<td>.757</td>
<td>.793</td>
<td>.693</td>
</tr>
<tr>
<td>Both Groups</td>
<td>.784</td>
<td>.724</td>
<td>.867</td>
<td>.859</td>
</tr>
<tr>
<td>Mean Silent Pause b/w AS Units</td>
<td>1.21</td>
<td>.976</td>
<td>1.009</td>
<td>.888</td>
</tr>
<tr>
<td>Both Groups</td>
<td>1.049</td>
<td>.926</td>
<td>1.177</td>
<td>1.153</td>
</tr>
<tr>
<td>Silent Pause Ratio</td>
<td>.362</td>
<td>.345</td>
<td>.296</td>
<td>.277</td>
</tr>
<tr>
<td>Both Groups</td>
<td>.350</td>
<td>.283</td>
<td>.327</td>
<td>.349</td>
</tr>
<tr>
<td># of Repetitions</td>
<td>.250</td>
<td>.162</td>
<td>.623</td>
<td>.054</td>
</tr>
<tr>
<td>Both Groups</td>
<td>.189</td>
<td>.057</td>
<td>.057</td>
<td>.113</td>
</tr>
<tr>
<td># of Self-Collections</td>
<td>.625</td>
<td>.703</td>
<td>.688</td>
<td>.351</td>
</tr>
<tr>
<td>Both Groups</td>
<td>.679</td>
<td>.453</td>
<td>.491</td>
<td>.434</td>
</tr>
<tr>
<td># of Stutters</td>
<td>.125</td>
<td>.243</td>
<td>.000</td>
<td>.162</td>
</tr>
<tr>
<td>Both Groups</td>
<td>.208</td>
<td>.113</td>
<td>.113</td>
<td>.057</td>
</tr>
</tbody>
</table>

Two-way MANOVA analysis and two-way ANOVA analysis found the following: in terms of speed fluency, both CH and EN learners showed an inverted V-shaped pattern. The measures increased from Task 1 to Task 2, and decreased from Task 3 on. The breakdown fluency measures generally showed a V-shaped pattern. From Task 1 to Task 2, the pause lengths significantly became shorter, but they increased from Task 2 to Task3 or/and Task 4. Overall, the learners of Japanese did not improve on fluency steadily from Task 1 to Task 4. They were able to increase their fluency in the beginning, but at the end of the second semester, their fluency significantly slowed down. These results may be explained by trade-off among fluency, accuracy and complexity (Ellis, 2009; Hirotani, Matsumoto, and Fukada, 2012).

3.2. Research Question 2

In terms of complexity factors, it was found that New Words was a significant factor to decrease the speed related measures, whereas New Structures positively affected them. For the breakdown fluency measures, Sentence Complexity was a major disfluency factor. In addition, the results showed that the repair fluency measures were not affected by the complexity factors very much. Only Number of Self-Corrections was negatively affected by Sentence Length.

3.3. Research Question 3

According to the two-way MANOVA and two-way ANOVA analyses, unlike Riazantszeza’s study (2001), no significant differences between CH and EN learners were detected in terms of fluency development. However, our study found complexity factors affecting breakdown fluency of the CH and EN learners differently. Riazantszeza (2001) found differences in breakdown fluency depending on the participants’ L1. The present study also found L1 influence on breakdown fluency.

4. Conclusions

Fluency development is a complex phenomenon involving L1 and complexity factors. A similar study with a larger number of participants is being planned as a follow-up.
5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Preparing EFL learners for studying abroad: Possibilities for developing their oral communication skills through classroom instruction utilizing CALL materials

Takeshi Matsuzaki

Abstract
This paper reports on an ongoing study in Japan that investigates the effectiveness of specially constructed CALL materials and instructional designs employed in an EFL classroom with students either being about to study abroad or considering studying abroad in near future. Specific learning materials containing 66 long and short model dialogs were prepared for this study, with key features being: (1) that half of them are video-recorded and the rest audio-recorded; (2) that all the dialogs are made available on YouTube; and (3) that the script of the dialogs and their Japanese translation are packaged in a booklet. Using these materials, a university course with 31 students taught by the author in the spring of 2012 spent a half to two-thirds of each class time on: (1) the author providing formal instruction on some dialogs, (2) the students memorizing some dialogs, and (3) the students checking each other on the dialogs that they had memorized for the past week. Memorization of the dialogs was part of their final grade for the course, too. For this study, two sets of questionnaires were prepared and administered to the students taking the course. Results indicate that: (1) memorization of dialog samples can be facilitated through instructional intervention, (2) different attributes of learning material may have differential learning effects, and (3) there is diversity in the degree of learners’ use of web-based CALL materials.

Keywords: model dialogs; memorization; video; YouTube

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1. Introduction
Research on fluent language use reveals that it is the vast chunks of language in memory that allow for fast language processing (Bolinger, 1975; Skehan, 1998). However, there have been few studies exploring the roles that language classrooms can play in encouraging and helping learners to memorize language chunks (Ellis, 2008). This study attempts to see those roles utilizing model dialogs with video or audio only, which were made available on YouTube, in a foreign language context. Research questions addressed are as follows:
1. Does the inclusion of dialog memorization as part of a course increase the degree of memorization by students?
2. Do video and audio materials for dialog memorization differentially affect learning?
3. Does the availability of the learning material on the Internet affect learning?

2. Method

A sample of 31 Japanese university students in a 2012 one-semester English course taught by the author participated. This course was mainly for students planning to study abroad.

The author had prepared 66 English model dialogs, half video-recorded and half audio-recorded, which were all made available on YouTube. The script and Japanese translation had been packaged in a booklet, a copy of which was given to each participant. Linguistic explanations on dialogs were given in class.

The memorization of the dialog material would be 30% of the students’ final grade. Every week, for a third or more of the 90-minute class time, students would review in pairs some dialogs, and when ready, perform those to another student or the author with the booklet closed. For each successfully performed dialog, the “checker” would sign on the “check sheet” for each performer. The author provided brief corrective feedback, too.

Two surveys were administered in Japanese. One survey, conducted both at the beginning and the end of the semester, asked about the participants’ attitudes toward various aspects of English learning. The other survey, administered only at the end of the semester, asked the participants to reflect on their model dialog study. Almost all items in the surveys were based on a six-point Likert scale. Table 1 covers some of the results with a re-numbering of the items.

<table>
<thead>
<tr>
<th>Survey item</th>
<th>Survey timing</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>When memorizing model dialogs, an incentive in the form of receiving a good grade will be favorable.</td>
<td>Initial</td>
<td>6%</td>
<td>15%</td>
<td>15%</td>
<td>27%</td>
<td>24%</td>
<td>13%</td>
<td>3.85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Final</td>
<td>0%</td>
<td>3%</td>
<td>14%</td>
<td>26%</td>
<td>29%</td>
<td>27%</td>
<td>4.63</td>
</tr>
<tr>
<td></td>
<td>Diff.</td>
<td>-6%</td>
<td>-12%</td>
<td>-1%</td>
<td>-1%</td>
<td>6%</td>
<td>14%</td>
<td>0.78</td>
<td>-0.32</td>
</tr>
<tr>
<td>2</td>
<td>The fact that there was some time spared for memorizing dialogs in each class motivated me to memorize the dialogs.</td>
<td>Initial</td>
<td>0%</td>
<td>0%</td>
<td>4%</td>
<td>14%</td>
<td>36%</td>
<td>46%</td>
<td>5.25</td>
</tr>
<tr>
<td></td>
<td>Final</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>4%</td>
<td>14%</td>
<td>36%</td>
<td>46%</td>
<td>5.25</td>
</tr>
<tr>
<td>3</td>
<td>The fact that there was some time spared for checking memorization in each class motivated me to memorize the dialogs.</td>
<td>Initial</td>
<td>0%</td>
<td>0%</td>
<td>7%</td>
<td>11%</td>
<td>25%</td>
<td>57%</td>
<td>5.32</td>
</tr>
<tr>
<td></td>
<td>Final</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>7%</td>
<td>11%</td>
<td>25%</td>
<td>57%</td>
<td>5.32</td>
</tr>
<tr>
<td>4</td>
<td>What percentage of the dialogs did you memorize at least once during the semester?</td>
<td>Initial</td>
<td>0%</td>
<td>0%</td>
<td>10-20%: 0%</td>
<td>30-40%: 3%</td>
<td>50-60%: 13%</td>
<td>70-80%: 33%</td>
<td>90-100%: 50%</td>
</tr>
<tr>
<td></td>
<td>Final</td>
<td>0%</td>
<td>0%</td>
<td>10-20%: 0%</td>
<td>30-40%: 3%</td>
<td>50-60%: 13%</td>
<td>70-80%: 33%</td>
<td>90-100%: 50%</td>
<td>81%</td>
</tr>
<tr>
<td>5</td>
<td>Model material for oral communication should include video.</td>
<td>Initial</td>
<td>5%</td>
<td>8%</td>
<td>25%</td>
<td>27%</td>
<td>27%</td>
<td>8%</td>
<td>3.86</td>
</tr>
<tr>
<td></td>
<td>Final</td>
<td>1%</td>
<td>0%</td>
<td>16%</td>
<td>28%</td>
<td>26%</td>
<td>28%</td>
<td>4.63</td>
<td>1.12</td>
</tr>
<tr>
<td>6</td>
<td>Model dialogs with video were easier to study than those with audio-only.</td>
<td>Initial</td>
<td>10%</td>
<td>4%</td>
<td>14%</td>
<td>26%</td>
<td>23%</td>
<td>23%</td>
<td>4.16</td>
</tr>
<tr>
<td></td>
<td>Final</td>
<td>10%</td>
<td>4%</td>
<td>14%</td>
<td>26%</td>
<td>23%</td>
<td>23%</td>
<td>4.16</td>
<td>1.52</td>
</tr>
<tr>
<td>7</td>
<td>Video dialogs were helpful for learning gestures and facial expressions.</td>
<td>Initial</td>
<td>0%</td>
<td>0%</td>
<td>7%</td>
<td>50%</td>
<td>25%</td>
<td>18%</td>
<td>4.54</td>
</tr>
<tr>
<td></td>
<td>Final</td>
<td>0%</td>
<td>0%</td>
<td>7%</td>
<td>50%</td>
<td>25%</td>
<td>18%</td>
<td>4.54</td>
<td>0.88</td>
</tr>
<tr>
<td>8</td>
<td>Learners will utilize digital materials for learning oral communication if they are easily used on their portable devices.</td>
<td>Initial</td>
<td>10%</td>
<td>2%</td>
<td>7%</td>
<td>26%</td>
<td>23%</td>
<td>23%</td>
<td>4.65</td>
</tr>
<tr>
<td></td>
<td>Final</td>
<td>10%</td>
<td>2%</td>
<td>7%</td>
<td>26%</td>
<td>23%</td>
<td>23%</td>
<td>4.65</td>
<td>1.21</td>
</tr>
<tr>
<td>9</td>
<td>In learning the model dialogs, I streamed the video and audio files on YouTube.</td>
<td>Initial</td>
<td>4%</td>
<td>4%</td>
<td>18%</td>
<td>39%</td>
<td>25%</td>
<td>11%</td>
<td>4.11</td>
</tr>
<tr>
<td></td>
<td>Final</td>
<td>4%</td>
<td>4%</td>
<td>18%</td>
<td>39%</td>
<td>25%</td>
<td>11%</td>
<td>4.11</td>
<td>1.17</td>
</tr>
</tbody>
</table>

Table 1: Survey results
3. Discussion

3.1. Research question 1

The instructional design in which the students’ final grade for the course depended largely on the extent to which they would memorize the dialogs seems to have worked well (Item 1). The other two designs in which part of each class time was spared for dialog memorization also seem to have worked very well (Items 2 and 3). The results best indicating the success of the intervention are on what percentage of the dialogs the students memorized (Item 4).

3.2. Research question 2

Dialogs with video seem to have brought about more learning effects than dialogs with audio-only. Their preference for the inclusion of video increased significantly compared to the beginning of the semester (Item 5). The superiority of video over audio-only dialogs in terms of learning effects can be further supported from the students’ overall reflections that video dialogs were easier for them and helped them learn non-verbal features ( Items 6 and 7).

3.3. Research question 3

While the participants were in more favor of digital material at the end of the semester if readily playable on their portable devices, their preference toward such material was still not that high (Item 8). Moreover, while more than 80% of the students had smartphones at the outset of the course, they did not fully utilize the material available on YouTube (Item 9). One possible reason is that they did not find the content readily accessible.

4. Conclusions

The complex harmony of all the instructional devices employed for the course may have been what made it work. Nevertheless, the descriptions of the course provided in this report are hoped to be a resource for other classroom practitioners and school administrators who wish to provide the best instruction they can. This research project is ongoing, and follow-up studies are being conducted, in which the research design is improved in order to find out whether the findings presented above are statistically sound.

5. Acknowledgements

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6. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Sustainability in CALL learning environments: A Systematic Functional Grammar approach

Peter McDonald
J.F. Oberlin University
Tokyo, Japan

Abstract

The rapid development of ubiquitous technologies offers many new opportunities for learners to express themselves. In the pre-digital age learners could only express themselves through written texts (the written mode) or spoken texts (the oral mode). By contrast, learners in a computer-assisted learning environment can quickly combine these two modes and even add visuals or music. These new texts, which Systemic Functional Grammar (SFG) researchers call multi-modal texts, are already widely used, such as in courses that use Moodle/Blackboard, blogs and digitally created presentations, among others.

However, new pedagogical opportunities also create new pedagogical challenges. SFG research suggests that multi-modal texts that utilize new technologies are more difficult to understand than has been accounted for in existing educational research. Moreover, SFG suggests that existing grammars and classroom methodologies are inappropriate for teaching these new multi-modal texts. A question therefore arises: how can teachers create sustainable pedagogical resources that enable students to utilize new technologies in a meaningful manner?

This paper will summarize research in this area and suggest new multi-modal classroom approaches that will assist in the teaching of new technologies. These new approaches will be illustrated with examples from student-created multi-modal texts. Finally, practical advice will be presented to help teachers apply these findings to their classrooms.

Keywords: systemics; multi-modality; digital technologies; curriculum change; literacy

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1. Introduction

This research aims to define a sustainable resource in CALL. In order for a CALL resource to be sustainable it must work within existing educational curricula. This feature is a necessary prerequisite of sustainability because, despite the potential for educational change that digitalization has offered since the nineteen nineties, curricula in traditional educational institutions have not fundamentally changed, even as we move from a pre-digital society towards a digital society. Curricula have failed to incorporate CALL resources because no agreed-upon pedagogical language enables teachers to discuss CALL classroom practices. Systemic Functional
Grammar (SFG), this paper argues, can provide this language and bridge the gap between the needs of the curriculum and the potentiality of CALL-based resources.

2. Creating CALL sustainability through SFG

Computers are changing society. Texts are no longer limited to the alphabet, and can now incorporate video, image and sound. Communication is no longer limited to the locality, but can take place on a global scale with relative strangers. Knowledge and skills, once specialized, are now widely available online and can be accessed when needed.

However, the curricula that educational establishments deliver to students have not fundamentally changed. Curricula are, to a large extent, still based on old technologies (paper, pens and textbooks) and traditional classroom methodologies. Indeed, classrooms still follow the nineteenth century industrial model, where a large group of students sit at separate desks while one teacher delivers a pre-prescribed, traditional curriculum (Collins & Halverson, 2009).

Curricula are difficult to change because of the “situational constraints” (Cuban, 2001) educational institutions face. Educational institutions have developed complex systems, the complexity (budget, size, number of stakeholders, inbuilt working practices, and so on) of which makes it difficult for them to adapt quickly to change. Moreover, teachers likewise are constrained. Teachers must successfully meet the needs of all institutional stakeholders, which hinders them from incorporating innovation into the classroom. Out of necessity teachers must depend on shared, established educational knowledge.

Such a shared pedagogical knowledge, the foundation upon which curricula are built, does not exist for CALL. Therefore, without this shared knowledge, CALL resources cannot be built into existing curricula. SFG can provide this missing pedagogical framework because it provides teachers with a multi-modal meta-language that can work alongside existing pedagogical meta-languages.

Education has separated modes in order to teach them, (writing, speaking, etc.), and relegated some modes to the lower divisions of the general curriculum, (visual and musical modes are taught to students who have a ‘special aptitude’ for them). Moreover, teachers have created separate pedagogical languages to talk explicitly about each mode, such as English grammar, rules of visual design and so on. However, this mono-modal approach is no longer sufficient for CALL where multi-modal texts combine modes in new and exciting, but complex and challenging ways (Royce, 2002).

The advantage of SFG is that it enables the different modes that make up multi-modal texts to be examined for their underlying textual relations, that is, how the visual mode combines with the written mode to create one overall message (Unsworth, 2006). This functionality of SFG gives teachers the tools to talk about multi-modal texts explicitly, just as they can talk about mono-modal texts explicitly, and thus creating a shared multi-modal pedagogical language. Once established, the language can be used to provide feedback, evaluate texts, make textual comparisons, and so on, which are the common building blocks of sustainable classroom resources.

3. A classroom example

SFG can help teachers talk about multi-modal texts explicitly and, therefore, they can begin to include these texts in everyday classroom activities. For example, a standard writing assignment, such as a descriptive paragraph, can easily be converted into a PowerPoint presentation. Asking students to convert a mono-modal text to a multi-modal text in this way supports the existing curriculum because it encourages students to reflect on: 1) the key ideas/words in each sentence; 2) the function of describing; 3) the clarity of their descriptions; 4) to what extent they have incorporated mood/feeling/emotions/etc. in their paragraph; 5) and the mechanics of each sentence.

The activity is also an excellent way to introduce students to two types of multi-modal text relations: concurrence and complementation (for a fuller treatment of multi-modal text relations see Unsworth, 2008). Figure 1 illustrates concurrence. The visual text reiterates the written/verbal text to support comprehension (Lui, 2004), making concurrence very useful for visualizing written texts that contain a large amount of detail, such as describing relationships of spatial placement and location.
Figure 2 illustrates complementation. The written/verbal text is closely related to, but not identical, to the visual text. Written texts describing mood and emotion are best supported by relationships of complementation. However, relationships of complementation can cause comprehension difficulties when both the written text and visual text are sending complex messages; concurrence may be a better choice in this instance (McDonald, 2009).

Thus, this simple classroom activity can be used to help students make textual comparisons among writing genres, such as traditional paragraphs, presentations and online writing that may combine visuals, (blogs, tweets, and so on) etc. Many of the components of alphabetic paragraph writing can easily be transferred to writing presentations and writing online, whereas others may only be appropriate in certain contexts. Thus, knowledge of SFG can help teachers create CALL resources that will enable them to build upon their pre-existing, non-digital classroom practices.

Figure 1: Concurrence

Figure 2: Complementation
4. Conclusions

More research has to be conducted to overcome the challenges of using SFG in classroom contexts. Establishing a theory for complex multi-modal systems can be difficult (Baldry & Thibault, 2005) and the usefulness of grammars in teaching has been the source of much debate (Brown, 2000). However, as this paper attempts to show, SFG can be used as a practical aid to support the creation of sustainable resources in CALL learning environments.

5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Evaluating assessment procedures in a super-sized English as a foreign language online class

Marisa Mendonça Carneiro
Universidade Federal de Minas Gerais
Belo Horizonte, Brazil

Abstract

Due to an increasing demand for online courses at universities and a consequent increase in class size as a strategy to meet these demands, it is important that new technologies be incorporated into the online educational experience in order to assist students with their learning process. In order to meet the demand for the development of English reading skills, a large online community was formed as a result of the implementation of Ingrede Project at the Federal University of Minas Gerais, in Brazil. The course, based on the MOODLE platform, is offered to the community of students and staff from the university, with an average of 2,500 students per semester. As teaching super-sized classes online presents unique challenges for course designers, this session aims at presenting how web 2.0 tools from the MOODLE platform were customized to devise activities that would help build students’ individual and collective knowledge, as well as students’ perceptions of their own learning process. The perceptions will be analyzed qualitatively by means of students’ narratives posted on the course blog along the semester. In addition, an evaluation of online tests, which are part of course assessment is also presented, based on the points for evaluation of computer assisted language testing outlined by Noijons (1994) and Chapelle & Douglas (2006). The results show that the online tests are in accordance with the guidelines and that students perceive the course as helping them develop reading and critical skills. The results will have practical implications for course designers.

Keywords: English as a foreign language; super-sized class; online learning

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1. Introduction

Paiva & Braga (2010) say that “computers and the internet have brought together all types of communication media known to date”, including informational artifacts including telephone and databanks. In addition, the internet allows interaction through chat, email and social networking sites, which is an advantage for super-sized classes, in terms of students participation.

As teaching super-sized classes online presents unique challenges for course designers, the objective of this section is threefold: (i) present the design of an online course in EFL reading skills, (ii) evaluate online tests based on Noijons (1994) and Chapelle & Douglas (2006), and (iii) analyze students’ perceptions of their own learning.
1.2 Ingrede

Ingrede is an educational and research project that aims at developing reading skills in English as a foreign language. Each level has its course material (Figure 1):

![Figure 1: Ingrede course material.](image)

The MOODLE environment provides additional tasks for the course. Students are assessed on their achievement in the tasks, online tests and final test. Assessment of tasks is done by teachers.

1.2.1 Glossary

Students build a glossary of terms from their area of knowledge (Figure 2). The MOODLE tool used is the Glossary.

![Figure 2: Glossary entries.](image)
1.2.2 Virtual Library

In this task, each student contributes with two academic texts (Figure 3). The MOODLE tool is Forum.

Figure 3: Text discussion in the Virtual Library.

1.2.3 Debate

Students have to read academic texts on a controversial topic in their area of knowledge, participate in a pool and discuss the topic in a forum (Figures 4 and 5). The MOODLE tools are Choice and Forum.

Figure 4: Pool on euthanasia.
2. Discussion

2.1 Assessing online tests

Chapelle & Douglas (2006) conclude that, given the unique character of online testing, the evaluation of computer-assisted tests should be done with a set of criteria that is different from the evaluation of other tests. Noijons (1994) suggests a set of test factors that should be taken into account when evaluating Computer Assisted Language Testing (CALT). In addition to the requirements of validity and reliability, Noijons distinguishes between two types of factors (Figure 6):

<table>
<thead>
<tr>
<th>Test Content</th>
<th>Taking the test</th>
<th>Before</th>
<th>During</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function/purpose of test</td>
<td>Entrance to test</td>
<td>Test instructions</td>
<td>Examples of items</td>
<td>Check of test</td>
</tr>
<tr>
<td>Test objective</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test length</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generating items</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item type</td>
<td>Fraud</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feedback</td>
<td></td>
<td>Breakdowns</td>
<td>Feedback</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registration of responses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation</td>
<td></td>
<td>Storage of data</td>
<td>Printing of data</td>
<td></td>
</tr>
<tr>
<td>Presentation test results</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 6: Table of factors in CALT (Noijons, 1994, p. 48)
Function/purpose of the text: The purpose of the online tests is to evaluate learners’ achievement.

Test objective: The objective is to assess whether learners are able to read and comprehend excerpts of texts in English.

Test length: Each online test is composed of two texts with 5 multiple choice questions each and can be done in less than 30 minutes.

Generating items: Texts are randomly selected from an item bank.

Item type: Multiple choice fits the course purposes.

Feedback: Students do not get any type of feedback during the test.

Time: Students are allowed enough time to take the test (120 minutes). The time they have left is shown on the screen (Figure 7).

Registration of responses: Data is collected and stored in MOODLE. Scores are exported to the academic system.

Presentation of test results to candidates: Students are able to check their score and answers after the test (Figure 8):

Taking the test

Entrance to the test: Students are strongly advised to take the test in one of the University computer lab in order to minimize the inconvenience of experiencing computer malfunction.

Test instructions: Before the test, students are given written instructions (Figure 9):
Prova Online 1

Dear students,

This online test consists of 10 multiple-choice questions (two blocks, each with five questions). It will be available from 23rd to 30th April. The time limit for completing this test is 2 hours and only one attempt is allowed. This is your only chance to familiarize yourself with the format.

At the end of the page, after the last question, you should click on 'Yes' to confirm the answers. If you have two blocks of questions, you must answer them all before moving on to the next question. If you change your mind, you can modify your responses.

This test consists of 20 points. Each question is worth 2 points. Please check your email for any comments.

Send your comments to ingrede@gmail.com

Tentativa permitida: 1
Este questionário foi encerrado em terça, 30 abril 2012, 22:55
Duração máxima: 2 horas
Tentativas: 690

NÃO SÃO PERMITIDAS OUTRAS TENTATIVAS

Figure 9: Written instructions.

Example of items: Students have the opportunity to do a mock test to familiarize them with test format.

Check of test: a trial run is done before the test period by volunteers.

Fraud: Items are randomly selected from an item bank making it more difficult for students to cheat.

Breakdowns: In case of breakdowns, responses are stored in MOODLE.

Feedback: Given the familiarity students have with quizzes in MOODLE, feedback is absent.

End of test: Learners have the chance to revise what they have done before the end of the test.

Storage of data: Moodle stores data related to the tests.

Printing of data: Test scores are transferred to the University academic system.

2.2 Students’ perceptions of their learning process

Madyarov (2009) used a framework to evaluate online English as foreign language course. Since one of the objectives of this paper is to analyze students’ perceptions of their learning process, the focus was on Madyarov’s quality of teaching and student assessment and course evaluation components of the framework.

The search for the keyword ‘knowledge’ in the blog entries revealed that students see the course as an opportunity to develop their skills in the language. There is a connection between what they think they are going to learn and what they think they will need in their careers. The search for the keyword ‘strategies’ showed that learners find them useful when reading a text.

They see the glossary as a tool to help them read texts in their professional area. As for the debate, the majority thought that reading and debating a hot topic was relevant for language learning and for professional development. For some students, reading and discussing helped them develop critical thinking. Students report that the activities they did in the CD ROM and the strategies they learned helped them take the tests.

3. Final remarks

The evaluation of Ingrede online tests based on the framework proposed by Noijons (1994) has shown to be in accordance with the guidelines. Ingrede is unique in terms of the number of its students, and the findings from investigating issues related to its instructional design and assessment procedures may inform future teachers and course designers in distance education.
4. Acknowledgements

I would like to acknowledge Professor Junia Braga for her invaluable contribution to this manuscript.

5. References


Global perspectives on Computer-Assisted Language Learning
Glasgow, 10-13 July 2013

Transformative learning: The developmental processes of L2 teachers as effective users of online resources for language teaching and learning

Sandra Morales
Newcastle University
Newcastle Upon Tyne, UK

Scott Windeatt
Newcastle University
Newcastle Upon Tyne, UK

Abstract

Nowadays, in order to meet the demands for effective second language teaching L2 teachers are expected to develop competence in using online resources with their language learners. A number of studies have shown that, in general, teachers have a positive attitude towards technology. But there is still little information that can help teacher trainers understand the developmental processes that language teachers undergo when developing competence in the use of online resources in virtual environments.

The focus of this study is not only the identification of the skills that L2 teachers need in order to use technological resources effectively with learners, but also the process by which they develop those skills. The aim is to examine how teachers make use of their existing knowledge and skills, and to observe how these are developed and transformed through online training and reflective practice. The underlying principles for the investigation are based upon Mezirow’s transformative learning and the skills teachers have to develop to make effective use of virtual settings.

The research methodology incorporates the design of an online training course for in-service English as a Foreign Language (EFL) teachers in Chile and Easter Island. The degrees for data analysis include perspectives, prior knowledge, skills, challenges, needs and pedagogical practices. Initial findings suggest that this awareness-raising process may help to increase the teachers’ confidence, knowledge and skills. This improvement enables them to make more informed decisions when elaborating technology-mediated tasks. Therefore, this kind of online professional development experience may educate teachers to reformulate their practices in order to become innovators in the second language classroom.

Keywords: Computer Assisted Language Learning; Teacher development; online teacher training; reflection; digital resources.

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1. Introduction

This investigation addresses significant teacher education and training issues in Computer Assisted Language Learning (CALL). It intends to show the foundations of a case study regarding the nature of the processes that L2 teachers undergo when trained to become more effective users of technological resources with language learners.

Although there are investigations that focus on teachers’ views about the incorporation of technology for language teaching, training and abilities for CALL (Hampel and Stickler, 2005; Hubbard and Levy, 2006; Compton, 2009; McNeil, 2013), it has been found that there is scarce data on how teachers enhance the skills to become competent when integrating technological resources in the L2 classroom.

The objective of this research was to identify and examine the teachers’ developmental processes when they increase their competence on using technology for language teaching. The study was conducted through an online training course elaborated upon the theory of transformative learning (Mezirow, 2000) and the skills needed for effective online facilitation (Hampel and Stickler, 2005; Compton, 2009). The training included a reflective cycle that consisted of enhancement of existing and additional skills, peer interaction and opportunities for reflection, both individual and as part of a community of practice. The e-course was designed considering Salmon’s (2001) criteria for virtual environment tasks and the community of inquiry framework (Garrison and Arbaugh, 2007). The course syllabus encompassed contents ranging from CALL theory to e-teaching models. The methodological framework was designed around a qualitative case study using the following research questions:

1. What attitudes and pedagogical/technical knowledge do teachers have and bring to the course?
2. What are the teachers’ developmental challenges and needs if they are to become effective users of online resources for language teaching?
3. What evidence is there of changes that have taken place during course?
4. What during/post-course evidence is there of the application of knowledge, skills and attitudes developed during the course in real language teaching contexts?

In this paper, preliminary results from a pilot study will be presented, as the comprehensive analysis of the main data set is still in progress. Nonetheless, representative findings can certainly be discussed.

2. Method

2.1. Participants

The participants of the study consisted of 26 EFL teachers from Chile and Easter Island with no previous formal training in technology for educational purposes.

2.2. Method and procedures

An online training course was designed in order to observe the participants’ developmental processes. The course design criteria took into account tasks that could effectively enable (1) access and motivation; (2) online socialization; (3) information exchange; (4) knowledge construction and development (Salmon, 2001). In addition, the community of inquiry paradigm regarding (1) social; (2) teaching; and (3) cognitive presence was incorporated (Garrison and Arbaugh, 2007). Consequently, the training involved a developmental cycle of theoretical, practical and reflective nature. The contents and materials of the course syllabus were selected and elaborated on after conducting a needs analysis survey among L2 teachers. The training was implemented on Moodle, a learning management system available for online learning, and was guided by the researcher as the virtual tutor. This e-learning experience was scheduled for eight weeks where activities and materials were posted once a week, so that the teachers were able to work autonomously in their own time. The participants were expected to revise the theory on the platform, as well as reflect on their individual blogs and the discussion forums. Moreover, they were asked to complete practical tasks for monitoring purposes. Feedback and support from the tutor was provided weekly.

2.3. Instruments
Elements from qualitative methods were chosen in order to gather data to examine the participants’ progress during the course. Having different sources of information was considered relevant to support the validity and make an in-depth analysis of the findings.

1. Pre/post online questionnaires
2. Pre/post online focus groups
3. Pre/post interviews
4. Blog/forum logs on Moodle

2.3 Data analysis

Information provided by a pilot study has been processed taking into account the following levels of analysis:

1. Attitudes/perception
2. Technological skills
3. Pedagogical knowledge/practices
4. Technological/Pedagogical needs
5. Online teacher training course experience

This primary examination has been conducted using SPSS and thematic analysis by means of a transformative education scale for distance learners (Motteram, 2006).

3. Discussion

Findings suggest that teachers’ successful developmental process depends on (1) their own perception and prior knowledge as technology users (i.e. digital native/immigrant teachers); (2) their awareness of the online resources for teaching; and (3) how this information is acquired and processed for decision making when lesson planning. The ‘know-how’ combined with the ‘know-why’ approach was beneficial to raise consciousness among the participants. Reflection positively contributed to build up confidence and, interestingly, a tendency to opt for group interaction instead of self-analysis was observed. In this sense, mutual discussion activates knowledge transmission from peers, thus, facilitating understanding. This indicates that having common or established teaching goals may support teachers’ course of actions, as they could apply their knowledge in a more situated environment. This may lead to an adjustment in their teaching style, creativity and capacity to innovate with their learners.

4. Conclusions

Teacher training for CALL still remains as an area to normalize, mostly if it is conducted at a distance. In order to support teachers to be skilful in using digital media for language teaching, the outcomes of this study attempt to provide knowledge to better comprehend L2 teachers’ online training and learning processes. Teachers need support in their existing skills, intrinsic motivation and teacher autonomy to be more determined to apply online resources in the L2 class. Also, they are to be encouraged to tackle challenges such as online task design. This reinforcement can be provided by an introspective cycle of examination and discussion so there is progressive transformation of L2 teaching practices in virtual environments. However, in this case study, there is further analysis to undertake in order to support more defined guidelines for teacher development in CALL. Nevertheless, it is possible to suggest implications regarding teacher roles, content delivery settings and successful e-pedagogy.

5. References


Global Perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

The impact of speech training software on teaching EFL

Hiroyuki Obari
Aoyama Gakuin University
Tokyo, Japan

Hiroaki Kojima
National Institute of Advanced Industrial Science and Technology
Tsukuba, Japan

Shuichi Itahashi
National Institute of Advanced Industrial Science and Technology
Tsukuba, Japan

Abstract

The purpose of this study was to investigate the effects of English speech training software on the production of English prosodic features by native Japanese EFL learners. The prosodic features examined included speech duration, speech power, F0 (pitch), and the ratio of vowel and consonant length. We were particularly interested in determining if Japanese students could improve their English pronunciation and overall proficiency by using the speech software. To assess the effectiveness of the training, an experiment was conducted to evaluate the target prosodic features of English utterances as produced by the Japanese subjects using quantitative methods. After using the speech training software for one semester, the students’ production of the target prosodic features showed improvement in terms of speech duration and intensity of consonants and vowels, and their mean CASEC computer test scores increased.

Keywords: Prosody; Acoustic Analysis; Duration; Pitch, Power; CASEC

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1. Introduction

A major goal of English education in Japan is to help students to speak English more intelligibly in order to communicate with native speakers more effectively. But how can Japanese students learn to speak English more intelligibly without a prominent Japanese accent? Many linguistic factors exist in evaluating the speech of nonnative speakers of English. Prior research has shown that rhythmic accent and pauses are more important than segmental features in producing intelligible English (Pennington, 1999). Due to the prosodic differences between the English and Japanese sound systems, native Japanese often experience problems with comprehension of English due to a misunderstanding of attitudes or of intentions, which is often caused by inappropriate intonation, rhythm, or stress. In the present paper, we examine the effects of using the speech training software Global Voice English on the Japanese pronunciation of English prosody in terms of duration, speech power, F0 (pitch), and ratio of vowel and consonant length.
2. Method

2.1 Speech training software

Starting in April 2013, the software Global Voice English has been used as the speech training software. The participants included 60 native speakers of Japanese, all undergraduates studying at a private university in Tokyo. The software was used mainly to train students in intonation before they delivered English presentations in class. Additionally, the software Prontest was used for analyzing the prosodic production of the 60 native Japanese participants.

The experiment was conducted during a period of 15 weeks. For the first recordings, the participants simply read several English sentences aloud, which were then recorded for the prosodic analysis. After the participants had studied six lessons using the speech software over a six-week period, they were again asked to record the same sentences for the purpose of comparing the prosodic features as produced during their first and second recordings. The following target parameters were analysed:

1. Sentence duration
2. Ratio of vowel duration over sentence duration
3. Ratio of vowel power and consonant power
4. Ratio of F0 max/F0 min in the sentences

The main differences between Prontest and Global Voice English are as follows:

1. Prontest software is packed with 10 lessons for training in segmental features.
2. Global Voice English enables users to record words and sentences. Once incorporated into the software, students can practice the prosody of the created utterances in order to get closer to the model English pronunciation as produced by a native speaker.
3. The training experiment using Global Voice English has been under way for nearly a month, and the pre-treatment recordings of 35 participants were acquired in April 2013. The post-treatment recording of the participants will be collected in July 2013 in order to help assess the effectiveness of the speech training software.

2.2 Computer test (CASEC)

The Computerized Assessment System for English Communication (CASEC) was used to evaluate the improvement of the participants’ overall English proficiency before and after the speech training. Only 35 Japanese participants (20 male and 15 female students) were chosen to read several sentences before and after training using this software due to the quality of the recordings. The students were administered the CASEC Computer test (English proficiency test), and their pre-training and post-training scores were compared.

3. Results and Discussion

3.1 CASEC

CASEC is an absolute evaluation testing system developed by the STEP Foundation (Society for Testing English Proficiency). Based on IRT (Item-Response Theory), this new Computer Adaptive Test (CAT) assessment system determines an individual’s English communicative ability with higher accuracy and shorter testing time. In addition, an on-line test administration system conveniently allows examinees to freely choose when to take tests. Showing a relatively high correlation, especially the 0.89 rate of correlation with TOEIC, CASEC can provide a predictive score for other tests. In the present study, CASEC was administered to assess the student’s improvement in English proficiency from April to July 2013. The students’ mean CASEC scores improved from 532 to 583 during this period. A t-test revealed that the difference between pre- and post-test scores was significant at a 5% level.

3.2 Prosody Analysis

The mean duration of the 35 participants’ utterances decreased from pre- to post-training (5383 ms vs. 4872 ms, respectively), at a significance level of 0.01, revealing that the participants could speak English at a slightly faster rate after training compared with before training.
The ratio of vowel duration over sentence duration decreased after training from 0.51 to 0.49, at a significance level of 0.01. When speaking English, native Japanese tend to be influenced by the difference between the English and Japanese vowel systems, as Japanese contains only five main vowels. The vowel ratio over sentence duration of the participants decreased to a level closer to that of natural English prosody.

The ratio of consonant power over vowel power increased from 0.32 to 0.39, at a significance level of 0.01. When speaking English, Japanese tend to pronounce consonants with less stressed accent. However, the speech training software helped the participants to produce English consonants with more natural stress.

With regard to the ratio of maximum F0 over minimum F0, there was no significant difference between pre- and post-training utterances, as only 16 out of 35 students improved their F0 ratio.

3. Conclusions

These results would appear to suggest that the speech training software was helpful in improving the students’ production of the target prosodic features, as well as improving their CASEC scores. The participants read the English sentences at a faster and more natural rate after training, and with less vowel duration and more intensity in their consonant production. However, with regard to F0, only 16 out of 35 participants improved their production of F0 after training. We recognize that one limitation of our study was the lack of a standard judgment estimation of what constitutes good or bad pronunciation, which was due to a weak correlation between the target parameters and ideal speech model. In future research, it will be necessary to establish a better correlation between the subjective judgments of native speakers and the speech model.

4. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

The effect of blended learning on watching on-line Coursera lectures using mobile technologies

Hiroyuki Obari
Aoyama Gakuin University
Tokyo, Japan

Stephen Lambacher
Aoyama Gakuin University
Tokyo, Japan

Abstract

The main goal of this study was to ascertain if a blended learning (BL) environment incorporating m-learning could help to improve the English listening, oral communication, and presentation skills of native Japanese undergraduates. The BL activities included having students watch on-line Coursera lectures using personal computers and mobile devices, as well as present oral summaries of the lectures they listened to both face-to-face and in front of the class. The students were required to spend a significant amount of time watching several on-line Coursera lectures during their commuting hours and then to write a 400 word lecture summary of each lecture they watched. An assessment of pre- and post-training TOEIC scores revealed that the students had adequately comprehended the Coursera lecture contents and that their overall listening and oral communication skills had improved through listening to the on-line lectures presented with both English subtitles on and off. A questionnaire administered after their exposure to the BL activities indicated that students were satisfied with the training involving the on-line Coursera lectures and were motivated overall by the BL program incorporating mobile learning.

Keywords: Coursera lectures; Mobile technologies; Blended learning; M-learning

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1. Introduction

“Five years from now on the web for free you’ll be able to find the best lectures in the world.” The above quote, uttered by Bill Gates at a conference in August 2010, was his bold prediction of the future state of “open” lectures, social media, and smartphones, which helped to usher the world into “the next era” of the web. Gates’ prediction is now actually being realised around the world. Coursera is an educational technology company that offers free online courses in a wide variety of areas, including the humanities, medicine, biology, business, computer science, and others. E-mobile learning technologies such as the iPhone, iPad, podcasting, video-casting, and others, are rapidly gaining popularity as an effective way to improve foreign language skills around the world. Coursera is one of the most useful e-learning resources available and is very conducive to mobile (m-)learning, whereby learning takes place at any time and at any place due to of the swift development of mobile technologies. According to Vinu, Sherimon, & Krishnon (2011), mobile technologies have succeeded in transforming learning methodologies. One such methodology that has received great attention in recent years is
blended learning (BL). BL combines traditional face-to-face classroom methods with computer-mediated activities, resulting in a more integrated approach for both instructors and learners. The goal of the present paper is to examine the effectiveness of BL activities using mobile devices for the purpose of improving the English language proficiency of native Japanese undergraduates, including their writing, oral communication and presentation skills.

2. Method

The present study was conducted over a period of four months during a single academic semester (October 2012 to January 2013). A total of 50 undergraduates, all native speakers of Japanese studying at a private university in Tokyo, were the participants of the study. The students were administered the TOEIC test as a pre-test in October 2013 and again as a post-test in January 2013, the purpose of which was to ascertain the effectiveness of the BL program.

The research questions targeted in this study were as follows:

- Can on-line Coursera courses help to improve the TOEIC scores of native Japanese students?
- Can on-line Coursera courses help to improve students’ oral communication and writing skills?
- Are BL activities using mobile devices useful in improving students’ overall English skills?

The blended-learning activities included: (1) students watching online Coursera lectures with the use of PC and mobile devices; (2) students presenting oral summaries of the lectures to their classmates both face-to-face and in front of the class; and (3) students spending extensive time watching several online lectures during their commuting hours and writing a 400-word summary of each lecture each week. At the end of the course, a questionnaire was administered to students after their exposure to the above activities.

3. Assessment of the Blended Learning Activities

For assessment purposes, we present a sampling of the data results below, including the results from TOEIC, which revealed that the students’ overall English proficiency had improved after their exposure to the BL activities. Also included are some of the results of the survey administered to students for the purpose of attaining feedback on how they felt about the BL activities.

3.1 TOEIC

The TOEIC results revealed that the mean scores significantly increased from 585 (SD=25.3) in the pre-test to 645 (SD=24.6) in the post-test. The TOEIC pre- and post-test results were analysed using a t-test, indicating that the difference between pre- and post-test scores were statistically significant at a 1% level. The improvement in scores would seem to indicate that the utilization of a learning environment integrating m-learning and e-learning helped the students to improve their overall English proficiency.

3.2 Questionnaire

A survey was administered to the participants after being exposed to the blended-learning program incorporating Coursera lectures. In response to the survey question “Did you find the Coursera lectures useful in improving your English proficiency?” 61% of students felt that the online lectures were very useful. And in response to the question “To what extent did you use mobile technologies to learn online Coursera lecture?” 30% of students responded having used their mobile devices to study the on-line English lectures.

3.3 Assessment of English writing and oral summaries

At the start of the semester, the students made numerous grammatical and structural mistakes in their summary writings. However, by the end of semester, their writings for the most part had fewer grammatical errors, were better organized, and were longer in duration. In addition, by comparing the first and final oral summaries, many of the students demonstrated significant improvement in their oral skills, particularly in terms of segmental and prosodic features, including pitch, intonation, and vowel duration.
4. Conclusions

An assessment of pre- and post-training TOEIC scores revealed that the Coursera lecture activities had a positive effect on the students’ overall English skills. In addition, the students’ listening and oral communication skills improved as a result of the on-line English lecture activities. A questionnaire administered after their exposure to the BL activities indicated they were satisfied with the on-line Coursera lectures and motivated by the BL environment incorporating m-learning. The students’ English writing and oral summary skills also improved after their exposure to the online Coursera lecture activities. Overall, these results would seem to indicate that blended learning using mobile technologies can be effectively integrated into the language learning curriculum and can play a positive role in improving students’ language proficiency. Additionally, instructor observations of the BL activities revealed that the students were excited by using a variety of IT tools, which enabled them to effectively learn the Coursera lecture activities by accessing a variety of learning materials from their mobile devices. M-learning helped to increase the amount of comprehensible English input with the aid of revolutionary education/learning applications. It was also highly motivating to the students by offering them a rich, informal, contextual, and ubiquitous learning environment in which it was possible to control their learning time, environment, and speed.

5. Acknowledgements

This work was supported by KAKENHI (23520698).

6. References


Global perspectives on Computer-Assisted Language Learning

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The effect of using online TOEIC related materials via mobile technologies

Hiroyuki Obari
Aoyama Gakuin Univ.
Tokyo, Japan

Tomoyuki Nagae
Newton Co.Ltd.
Tokyo, Japan

Nobuyoshi Yamagishi
Newton CO.Ltd.
Tokyo Japan

Abstract

An online TOEIC training kit was administered to Japanese EFL students for the purpose of evaluating its effectiveness for e-learning and m-learning. The research study was conducted during a five month period from September 2012 to January 2013, and included approximately 60 students. The students spent roughly eight hours per week studying the TOEIC learning materials during their commuting hours using their smartphones. The students were tasked with spending 50 hours to complete their online TOEIC course via PCs and mobile phones. The main objective of the study was to examine the effectiveness of the online learning activities via overall improvements shown in post-training TOEIC and CASEC scores. This study demonstrates the advantages of using Newton’s e-learning and TLT systems for improving English proficiency.

Keywords: TOEIC; e-Learning; Mobile technologies

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1. Introduction

E-mobile learning technologies such as the iPhone, iPad, and others, are rapidly gaining popularity as an effective way to improve foreign language skills around the world. Newton’s e-Learning TLT Software is a form of Web-Based Training (WBT) education materials developed to allow full expression of the convenience that comes with e-learning in academic settings. The merits of the software lie in the fact that individual learners are not only able to review their studies any time, anywhere. Teachers are also able to uniformly manage the progress and results of their research studies. As a result, this software can be employed for assignments in everyday classes apart from CALL and PC labs, as it is very conducive for learning regardless of the time or place when used with tablet PCs or smartphones, and possess the potential for superior improvements over traditional study modalities. The convenience of the software stems from the fact that the educational TLT software materials are an internet-based form of e-learning, and are predominantly drill-based, problem exercise materials.

2. Newton’s e-learning and TLT System

What makes possible the effective mastery of problem exercises is the integration of the following:
First, the programs extract the necessary contents on the basis of each student’s records in order to present them with their targeted assignments. Then, the students’ tests, learning, and teaching are all repeated automatically, and their records are accumulated in reiterations of the learning cycle until they become proficient. The overall systems are called “TLT Software” and are the only computerized education materials to have acquired patents in Japan and the US (domestic patent No. 3820421, US patent No. 5888071). The following three functionalities form the backbone of these patents:

1. Staged learning functionality: control of learning in three Testing, Learning and Training steps (forming the initials for TLT)
2. Automatic learning functionality: automatically executes weak point extraction / repeat learning.
3. Automatic decision functionality: automatically determines true/false answers with the first sound character for an answer (one-touch input).

The systems control problem arrangement/question order/step progression in the materials on the basis of these functions patented in the US and Japan.

3. Contents of materials for TOEIC test preparation

Newton’s e-Learning materials for TOEIC test enable studying commensurate with every proficiency stage possible, from start through progression. Moreover, it contains a total of over 24,000 learning challenges. Overall, they are composed of two courses (A and B), each with the aim of improving TOEIC Bridge and TOEIC test scores. Also, both A and B courses are comprised of two Exercise Materials and Test Material types.

1. The Exercise Materials include four sections: Problems, Basics, Dictation, and Vocabulary Training types, with exercises being presented in separate parts.
2. The Test Materials provide fixed Web Test A/B tests (8 total times), and short Web Test A/B by Part tests (20 total times).

4. Controlling function of teaching materials and mobile learning

Use of the teaching materials management functions allows one to view the progress of students both individually and as a group, to have a grasp of their learning status, to make changes to various settings, and to download data. Moreover, interactive functionality can be exploited as well. From 2012, Newton’s e-Learning supports not only Windows XP, Vista, 7 and 8 (Internet Explorer 7 or above), but also Macintosh (Mac OS X 10.4 to 10.8 with Safari 4, 5 and 6), the iPad (Mobile Safari), and smartphones for wider learning settings.

*Smartphones are supported for: iPhones and the iPod Touch with iOS4, iOS5, iOS6, and Smart devices with Android 2.3, Android 4.0.

5. The study and conclusions

The students of the present study spent approximately 42 hours completing their TOEIC learning materials via their smartphones or PCs. The study, which began in September 2012 and ended in January 2013, targeted some 60 Japanese EFL students who were required to spend 50 hours to complete their online TOEIC course via PCs and mobile phones. By the end of the semester, the students had completed approximately 80% of their course contents. The results revealed that their reading and listening comprehension skills had improved, as shown by their mean TOEIC scores, which increased from 452 (SD: 112) to 566 (SD: 122), and their mean CASEC scores, which increased from 556 (SD: 86) to 615 (SD: 74) over a period of three months. Several questionnaires were administered to students after their exposure to the online TOEIC course activities to evaluate the effectiveness of the mobile and e-learning, and the students responded that the activities were very helpful in improving their overall English skills.
6. References


Empirical validation of a design hypothesis: The EuroCatering project

Margret Oberhofer
University of Antwerp
Antwerp, Belgium

Jozef Colpaert
University of Antwerp
Antwerp, Belgium

Abstract

This paper discusses the design concept for EuroCatering Language Training (www.eurocatering.org), a language course for trainees, students and workers in the hotel and catering industry. It was designed in 2008 as an online course for students who would be going abroad for internships in kitchens or restaurants, sometimes without any knowledge of the local language. Analysis of the trainees’ goals reveal that their greatest fear was not being on their own but appearing incompetent to their new chefs and colleagues. Their personal goals primarily involved being respected as competent professionals, and the lack of language skills was a possible impediment. Our design hypothesis was that we should focus on creating willingness and acceptance in the minds of users by considering their personal goals first, before focusing on linguistic-didactic qualities. Analysis of usage and motivation of the learners conducted in 2011 largely confirm our research hypothesis. At the same time, changed circumstantial factors (e.g., learner types, teacher expectations, contexts and languages) require us to re-conceptualise the subsequent working hypothesis.

Since the course was launched, 12,516 learners have completed more than 204,090 exercises on the multilingual and freely accessible website. The kit has been integrated into curricula both nationally and internationally. It has won European Language Labels in six European countries, and it received the European Language Label of the Labels Award in 2012.

Keywords: language for specific purposes; personal goals; empirical validation; courseware design

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1. Introduction

EuroCatering (www.eurocatering.org) is a web-based language-learning tool designed to help trainees, students and workers in the hotel and catering industry to improve their oral language competences in 12 languages. It helps target groups acquire basic specific vocabulary and communicative competences necessary to efficient

6 The 12 EuroCatering languages are Dutch, English, Finnish, French, Galician, German, Irish, Italian, Norwegian, Polish, Slovenian and Spanish.
functioning in kitchens, restaurants or hotels abroad. Trainees are treated as ‘social agents’ who must function adequately in stressful working environments, understanding instructions given by managers or chefs. EuroCatering focuses largely on reception and basic productive language (e.g. following short instructions and answering short questions).

EuroCatering was designed in 2008 as an online course for students going abroad for internships in kitchens or restaurants, sometimes without any knowledge of the local language. Although the original goal was to develop a relatively traditional vocabulary-acquisition tool, the partners eventually applied our Personal Goals Theory (Colpaert, 2010). The project was used as an empirical validation of the hypothesis that the design should focus on personal goals first, addressing linguistic-didactic qualities only in a second stage. Analysis of the trainees’ goals reveals that their greatest fear was not being on their own but appearing incompetent to their new chefs and colleagues. Their personal goals primarily involved being respected as competent professionals, and the lack of language skills was a possible impediment.

2. Method and results

Needs analysis at the beginning of the project identified the first internship abroad as a crucial period for trainees, as it often shapes attitudes towards pursuing careers in the catering sector. Basic language skills can help make this experience successful. Results from 35 in-depth interviews suggest that trainees largely prefer ‘doing’ (i.e. performing practical tasks) to ‘learning’ (e.g. absorbing theory and grammar rules or reading lengthy texts). To help them acquire basic language skills, tools should be visual and practice-oriented.

The three design objectives for EuroCatering therefore focused on developing a language course that is: (a) based on specific, relevant vocabulary for kitchen and restaurant environments, avoiding theory and excessive emphasis on written text; (b) visually attractive and engaging (as the target group is less interested in language study than in practical activities); and (c) easily accessible to all language learners, including those with no knowledge of the target language.

The design solution ultimately involved a platform for exchanging information (the ‘tray’) and a dedicated application (‘the cloche’). In ‘the cloche’, learners hear instructions given by a foreign chef or manager, followed by a set of exercises that enable learners to understand the instructions. This approach is intended to create willingness and acceptance in the learners’ minds, enabling them to focus on what they need to learn.

A follow-up project (EuroCatHos) was launched in 2010, extending the original language course with five additional languages and a new sector (reception). At the beginning of this project, we conducted two analyses concerning the use of the online course thus far: quantitative analysis and an online survey amongst learners and teachers.

According to user statistics provided by Google and Moodle, approximately 4,700 users accessed EuroCatering between November 2008 and February 2011, completing 79,590 exercises. This number has since increased significantly, with more than 12,500 users completing 204,090 exercises.

In addition to analysing user statistics, we conducted an online survey examining the personal uses and perceptions of 128 students and 34 teachers. This paper focuses on several results from the student questionnaire:

- Most students liked working with EuroCatering, for the following reasons (multiple answers allowed): type of exercises (nearly 50%), working with the computer (nearly 35%) and the programme’s appearance (nearly 40%).
- Most students reported being able to function in the foreign language passively: 68% could understand words, phrases or sentences they had just learned upon hearing them; 33% were confident enough to use the language actively; and 30% could actively use words, phrases and sentences they had just learned.
- More than half of the students thought that, after ordinary preparation, they would be able to understand their foreign colleagues either slightly (35%) or completely (20%), and 24% were confident enough to say a few things themselves.

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7 In all 68%: understands words (37%) and understands phrases and sentences (31%).
8 In all 30%: uses words (20%) and uses phrases and sentences (10%).
• The majority (54%) of the students were committed and motivated to complete all exercises in a section without instructor guidance, while 25% completed half of the exercises without instructor guidance (25%).

3. Discussion

This project was challenging, as the design context was quite specific: a specialised language course focusing on visual input and meta-language rather than on written language. The target group was also specific: largely unmotivated language learners, most of whom were going abroad for the first time and who needed to study a language without instructor support. Our design hypothesis was that focusing on personal goals first would create willingness and acceptance in the users’ mind, thus generating positive linguistic and didactic results.

The positive analytical results and usage figures outlined above largely confirm our research hypothesis, although they do not directly determine the subsequent design hypothesis, which should be re-conceptualised in a future project, taking into account circumstantial factors (e.g. learner types, teacher expectations, contexts and languages).

4. Conclusion

This project validates the EuroCatering design hypothesis and represents a small step towards the empirical validation of our educational engineering model, which is based on more than 25 years of R&D in language courseware, resulting from four paradigm shifts:

1. Ecological: Learning should be expected from the entire learning environment rather than from individual artefacts.
2. Process-oriented: More time and energy should be spent on the design process rather than on features and qualities of a learning environment as a product.
3. Psychological: Most design information is located in subconscious factors that either hinder or stimulate the learning process.
4. Distribution: The learning/teaching process should be distributed over many different dimensions (e.g. media, actors, content types, activity types, technologies).

Formulating the next project hypothesis will entail another validation stage of these paradigm shifts as hypotheses.

5. Acknowledgements

EuroCatering Language Training was carried out with funding from the Leonardo De Vinci Programme (2006-2008), and EuroCatHos was carried out with funding from the Lifelong Learning Programme (2010-2013).

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EuroCatHos. http://www.eurocathos.eu/


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Social groups in CALL contexts, complex adaptive systems (CAS)

Vera Paiva  
Universidade Federal de Minas Gerais  
Belo Horizonte, Brazil

Junia Braga  
Universidade Federal de Minas Gerais  
Belo Horizonte, Brazil

Rafael Vetromille-Castro  
Universidade Federal de Pelotas  
Pelotas, Brazil

Symposium abstract

Grounded in both sociocultural theory and the claim that groups of individuals in online learning contexts can be seen as complex adaptive systems (CAS), this symposium debates how different social groups interacting in CALL contexts can be seen as complex adaptive systems (CAS), and the implications of such a metaphor for language development. Different but congruous views on the online classroom as a CAS are presented and specific reflection is developed to what concerns online interaction.

The complexity of online collaborative work

Vera Paiva  
Universidade Federal de Minas Gerais  
Belo Horizonte, Brasil

Abstract

This paper presents some results from empirical research with university students using wiki tools to write collaborative texts. The results show that the use of wikis did not change the participants’ behavior because they resisted collaboration, which is an essential element for the dynamicity of a CAS.

Keywords: dynamic systems, collaboration, wikis

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1. Introduction

According to the sociocultural theory, “people working jointly are able to co-construct contexts in which expertise emerges as a feature of the group” (Lantolf, 2000:17), and I believe digital environments are ideal spaces for group work. Along this line, I assume that people writing together in a wiki platform make up a complex adaptive learning system and that their joint interactions produce texts of higher quality than the sum of their individual texts because of the emergence of a “collective intelligence” (Levy, 1997). But do students collaborate as expected? In order to answer this question I carried out empirical research with undergraduate pre-service English teachers.

2. Method

The students were enrolled in an online course - Introduction to digital tools for language teaching – in a Brazilian university in 2011. They were divided into five groups of six undergraduate students and were supposed to write essays in English about “the integration of technology in the English Language classroom” using a wiki tool. They wrote their texts during two weeks and chose the wiki platform of their preference. Each student used a different color for his/her contribution so that the teacher could identify the dynamicity of each group. The students were told that everybody was supposed to collaborate and that evaluation would take into account content, quality of collaboration and participation. It was emphasized that they should not only add content, but also edit their classmates’ contributions by correcting mistakes and adding further information, exemplifications and new references.

3. Discussion

The wiki tools did not attract the expected collaboration. Although students had two weeks to develop a good text, they did not invest enough time to write a real collaborative essay. Most students limited themselves to their individual contributions without any commitment to the final product. One student sent her part by email, without revising what others had written. In spite of using a tool that affords interaction and collaboration, most groups just produced patchworks of individual texts. Content was poor and no real collaboration by means of editing, corrections, and addition of relevant information was detected. Expertise did not emerge as a feature of the group. Visual representations of the pages showed a sequence of paragraphs in different colors instead of multi-colored paragraphs, which would represent real collaboration.

4. Conclusions

Human CAS can exhibit unexpected behaviors and the wiki technology was not enough to change habitual group behaviors or enable the emergence of a collective intelligence. Wiki tools may mislead one into thinking that they facilitate the emergence of wholes that are greater than the sum of the individual productions. One limitation of the study was that, after feedback, the students did not write another essay in a wiki platform. Therefore, we could not evaluate if the group, viewed as a CAS, had learned through feedback. I conclude that digital tools alone do not change behavior and that mindsets must also change.

5. References


Fractal groups: Participation and collaboration in systems that learn

Junia Braga

Universidade Federal de Minas Gerais
Belo Horizonte, Brazil

Abstract

The creation of on-line learning communities in distance learning has been recognized as a pedagogical intervention capable of promoting the construction of shared knowledge. One of the challenges researchers are faced with is the need to advance understanding of how to facilitate the construction of shared meaning in on-line collaborative contexts. The research here presented shows that the same behavior displayed by a large group of students was also found in small groups with different number of students, which reinforces the fractal characteristic of these groups. The fractal group will be discussed in light of complexity, focusing on the qualities of complex systems, namely: distributed control, self-organization and emergence.

The findings of this research aim to demonstrate the dynamics involving participation and collaboration in autonomous on-line communities, as well as evidence of recursive patterns, such as reciprocity, conflict and distributed leadership emerging from these dynamics.

Keywords: Complexity; on-line communities; fractals.

1. Introduction

Creating on-line communities has been recognized as a pedagogical intervention capable of embracing course designs that take into account negotiation and collaboration. Drawing on complexity theory, this work discusses the fractal nature of communities whose participants interacted without the direct intervention of the teacher.

Complexity science is focused on the observation and description of systems that adapt, self-organize and maintain themselves; that is, for our purposes, systems that learn. Other qualities of these systems include dispersion of control and patterns that emerge from the interaction of its agents. The control of a complex system is decentralized and, as highlighted by Palazzo (2004), it has the capacity to self-organize. Organization arises spontaneously out of the multiple interactions between the component units. Adaptive systems may also present ‘self-similar’ patterns in several scales - fractals and implies that the whole contains all the properties of the part, just as the parts contain all the properties of the whole (Bar-Yam, 2000). This paper, based on the author’s doctoral study, discusses the fractal nature of the on-line communities and how these system qualities can promote insights for the development of pedagogical designs for large groups.

2. Method

Two classes consisting of 50 pre-service teachers participated in a teacher education course offered by the School of Languages and Literature at a public university in Brazil. Despite following the same course procedures, these two groups had distinct interactional environments, were subdivided into subgroups of 2 to 6 students according to their majors—English, Spanish or Portuguese—and were encouraged to open a discussion list for task development. The discussions presented will be based on the analysis of the messages posted in groups’ discussion lists.

3. Discussion

The emergence of recurring patterns generated from the network of relations demonstrates the fractal character of the groups. Leader alternation, for example, is observed in communities of different numbers of participants. As group participants had to post a collective task based on individual contributions, they opted for distributed leadership claiming that the load of work for the leader could be minimized. Deadlines were also set for handing in individual contributions in the communities.
Adaptability and self-organization are also observed when the participants needed to seek technological alternatives for the posting of assignments.

Dissatisfaction and the diverse tensions generated conflicts in the groups, another recurring pattern denoting their fractal character.

4. Conclusions

The interactions analyzed show that, as in any complex system, the on-line communities rearrange and reorganize themselves as they adapt and gain experience. This in essence shows that the dispersion of control allows students to make decisions of their own and construct shared knowledge.

The dynamics observed in the autonomous communities can serve as a starting point for the development of educational experiences that seek to promote learning through participation in a network whose focus transits between situational contexts, local and global interactions alike.

5. References


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**Social interactive entropy in online classrooms**

Rafael Vetromille-Castro

Universidade Federal de Pelotas

Pelotas, Brasil

**Abstract**

This paper deals with entropy, a phenomenon that is constantly at work and affecting every CAS. A specific type of entropy for social groups, defined as social interactive entropy, is brought to discussion as an attempt to promote reflection from a complex perspective on how this phenomenon affects the behavior of an online classroom and influences social CAS by providing or restricting conditions for online interaction and, hence, learning to emerge.

**Keywords**: Complex adaptive systems; entropy; interaction.

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1. Introduction

From a sociocultural and complex perspective (The ‘Five Graces Group’, 2009:2), interaction is central in any language learning classroom, not only in face-to-face (F2F) situations, but especially in distance/digital environments. In this paper, I assume interaction as an essential element for knowledge construction, the moving energy in a system, and claim that groups in learning contexts can be seen as CASs (Davis & Simmt, 2003; Bowsfield, 2004; Vetromille-Castro, 2008), bringing to discussion the phenomenon that constantly affects every social CAS – the social interactive entropy (Vetromille-Castro, 2007). Understanding how this phenomenon influences the behavior of a classroom under a complex perspective seems to be important for language educators to deal with different moments in the life of such a social CAS, in order to provide conditions for interaction and, hence, learning to emerge.
2. Method

Interaction between 37 students in three virtual learning environment courses was analyzed. Each course lasted for 10 weeks and learners were supposed to use weekly fora to exchange ideas and discuss tasks. Messages exchanged along the course were investigated in terms of quantity, content and qualitative social values (Piaget, 1973), with the aim of identifying both highly interactive periods and values permeating interactions.

3. Discussion

Analysis allowed for the identification of three moments along the courses – maximum entropic force, systemic resistance and systemic surrender – and a phenomenon permanently forcing interaction to cease: social interactive entropy. The first moment lasted for two weeks and consisted of messages that, while abundant, were not addressed to any specific individual and did not generate interaction. Through this lack of interaction, the number of messages fell dramatically until the third week, revealing energy loss and increase in disorder in CASs. The second period lasted from the third to the seventh week. CASs struggled to survive and in some weeks some individuals interacted more than others, revealing the constant, typical systemic disequilibrium. The chaotic behavior was a potential context for learning to flourish, since, as some authors suggest (Gleick, 1989; Paiva, 2011:193), the edge of chaos is the zone of maximum creativity. In the last period, from the eighth to the tenth week, interactional flows tended to zero. Arguably, such behavior took over due to the fact that learners had already achieved the expected goals and had no motivation to interact. Having no force to compensate energy/interaction loss, the classroom as a CAS succumbed to social interactive entropy.

4. Conclusions

Authors have shown how pertinent it is to take a complex look at several fields in Applied Linguistics. When it comes to online classrooms being seen as CASs, it is remarkable how essential energy is for the systems’ maintenance and development, or how essential interaction is for systems to fight social interactive entropy, survive and evolve. Thus, looking at classrooms as CAS and realizing the effects CAS characteristics and entropy exert on language learning/teacher education social groups, it appears to be important to consider practices, attitudes and mechanisms to provide groups with reasons to keep on interacting and constructing knowledge.

5. References


Global perspectives on Computer-Assisted Language Learning

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Impact of iPod Touch-supported Repeated Reading on the English oral reading fluency of L2 students with specific learning difficulties

Salomi Papadima-Sophocleous
Cyprus University of Technology
Lemesos, Cyprus

Marina Charalambous
Cyprus University of Technology
Lemesos, Cyprus

Yiannis Mallouris
Cyprus University of Technology
Lemesos, Cyprus

Abstract

In recent years the use of new technologies has been extensively explored in different aspects of language learning pedagogy. The objective of this research was to investigate the impact Repeated Reading activity, supported by iPod Touch, could have on the English Oral Reading Fluency (ORF) of second language university students with Special Learning Difficulties (SpLD) at Cyprus University of Technology. As part of their university courses, students have two compulsory English courses. Due to their SpLD and low level of language competence, the eight participants enrolled in the English programme for students with SpLD. This programme is based on the phonological approach and the research done in methods dealing with dyslexia (Shaywitz et al., 2004). After being introduced to the iPod-supported Repeated Reading activity, students worked independently for 8 weeks. They listened to and replicated three recorded texts performed by native speakers, using Voice Memo. Texts were based on specific phonetic rules the students had to master. Students recorded their best performance of each text reading, using DropVox. Curriculum-Based Measurement, adapted by Rasinski (2004), was used to measure students’ automaticity (speed and accuracy), and an adapted version of Zutell and Rasinski’s (1991) Multidimensional Framework to measure prosodic features of fluency. A phonemic accuracy scale was developed and used to assess students’ performance related to specific phonemes students had difficulty with. Data analysis revealed that the independent out-of-class use of Repeated Reading, supported by iPod Touch technology, helped in increasing students’ automaticity, improving their prosodic features of fluency, including that of specific phonemes.

Keywords: Oral Reading Fluency (ORF); Special Learning Difficulties (SpLD); dyslexia; reading deficiencies; phonics; Repeated Reading; iPod Touch

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1. Introduction

During spring semester 2012, Cyprus University of Technology Language Centre realised that many English
students with Special Learning Difficulties (SpLD) needed more practice in Oral Reading Fluency (ORF) and that the English for SpLD students course lacked systematic ORF practice; therefore action needed to be taken to remedy this matter. The aim was to explore whether and to what extent the provision of after class practice through the use of repeated reading instructional technique and iPod Touch technology support could improve student ORF. Building on previous research on ORF models (The National reading Panel, 2000; Samuels, 1997), and on models based on the phonological approach and research conducted in methods dealing with dyslexia (Shaywitz et al., 2004), an autonomous learning ORF programme was developed. The English SpLD ORF iPod Touch Programme was designed based on Experimental Theory.

2. Method

Three authentic text types of A1 Common European Framework of Reference (CEFR) level were used. The texts were phonetically based on specific rules that were taught in class and thematically corresponded to the curriculum. Apple iPod Touch technology and a selection of software were used during the eight-week project. This technology allowed the eight students to have access to native-speaker models, to practise, record, and upload their readings using VoiceMemo, Dropbox and DropVox.

To determine whether students’ ORF improved, including specific phonemes requiring additional attention by SpLD students, their reading Automaticity and Prosody were assessed. Curriculum Based Measurement (CBM), Multidimensional Fluency Scale (MFS) and a phonemic accuracy scale were used to measure these ORF dimensions.

3. Discussion

3.1. Automaticity

Broadly accepted measure of ORF, CBM measures two aspects of automaticity:

a. Speed or rate of correct words per minute (CWPM) quantitatively;
b. Accuracy, both quantitatively, by establishing the number of correct words decoded and recognized per minute, and qualitatively by establishing the types of errors student make while reading (Rasinski, 2004).

3.1.1 Rate

Participants showed moderate reading rate growth from the first (R1) to the second (R2) reading of each text in Words Per Minute (WPM) and CWPM. This was also evident from the average WPM and WCWPM from R1 to R2 of all three texts:

<table>
<thead>
<tr>
<th>Text Type</th>
<th>Average WPM</th>
<th>Average CWPM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R1</td>
<td>R2</td>
</tr>
<tr>
<td>1st text</td>
<td>55</td>
<td>85</td>
</tr>
<tr>
<td>2nd text</td>
<td>51</td>
<td>68</td>
</tr>
<tr>
<td>3rd text</td>
<td>63</td>
<td>74</td>
</tr>
<tr>
<td>All texts</td>
<td>56</td>
<td>75</td>
</tr>
</tbody>
</table>
3.1.2 Accuracy

3.1.2.1 CWPM

The levels of performance (Independent Level: 97-100%; Instructional Level: 90-96%; Frustration Level: <90%) reflect various levels of word decoding accuracy (CWPM) (Rasinski, 2004).

English SpLD students’ level of performance for word decoding from the first to their second reading improved slightly: the percentage of English SpLD students at Frustration reading level, who found texts too challenging to read, decreased; although the percentage of students at Instructional level, who were able to read texts with some assistance, increased somewhat, there were no students at Independent level, able to read texts without assistance (Rasinski, 2004):

Graph 1: Levels of performance for word decoding – Accuracy (all texts)

3.1.2.2 Accuracy: Types of errors

Five different types of errors (Hambrock, 2005) were identified. The most common type made by the participants were mispronunciation (44%), hesitations or no attempts (25%) and word substitution (15%). There was a small percentage of omission (8%) and some word reversals (6%). It was interesting to notice that the results in the first three categories rose during the second reading instead of reducing; that is thought to be due to the high percentage of mistakes made by specific students, which affected the results of the whole group. Also, all students showed more hesitation during the second reading. This is believed to be mainly because of their strong wish to be more accurate in their second readings.

Table 2: Types of errors

<table>
<thead>
<tr>
<th></th>
<th>R1</th>
<th>R2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(All texts)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mispronunciation</td>
<td>42%</td>
<td>46%</td>
<td>44%</td>
</tr>
<tr>
<td>Hesitation/ No attempts</td>
<td>17%</td>
<td>26%</td>
<td>25%</td>
</tr>
<tr>
<td>Substitution</td>
<td>15%</td>
<td>16%</td>
<td>15%</td>
</tr>
<tr>
<td>Omissions</td>
<td>11%</td>
<td>4%</td>
<td>8%</td>
</tr>
<tr>
<td>Word reversal</td>
<td>6%</td>
<td>5%</td>
<td>6%</td>
</tr>
</tbody>
</table>

3.2 Reading Prosody

The adapted version of Zutell and Rasinski’s (1991) MFS of 1 to 4, with 1 being the lowest and 4 being the highest, was used to measure qualitatively ESAP students’ prosodic features of fluency. On the whole, students’ prosody improved from the first to the second reading of each text: expression and volume, smoothness, and
pace percentages moved from all four levels to the last three levels. However, although in some areas they reached number 4 of the scale, the percentage was not very high.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Expression and volume</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First reading*</td>
<td>49%</td>
<td>42%</td>
<td>9%</td>
<td>-</td>
</tr>
<tr>
<td>Second reading*</td>
<td>24%</td>
<td>28%</td>
<td>36%</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Phrasing and information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First reading*</td>
<td>60%</td>
<td>36%</td>
<td>4%</td>
<td>-</td>
</tr>
<tr>
<td>Second reading*</td>
<td>47%</td>
<td>33%</td>
<td>20%</td>
<td>-</td>
</tr>
<tr>
<td><strong>Smoothness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First reading*</td>
<td>80%</td>
<td>20%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Second reading*</td>
<td>54%</td>
<td>36%</td>
<td>-</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Pace</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First reading*</td>
<td>54%</td>
<td>36%</td>
<td>10%</td>
<td>-</td>
</tr>
<tr>
<td>Second reading*</td>
<td>25%</td>
<td>45%</td>
<td>15%</td>
<td>15%</td>
</tr>
</tbody>
</table>

*all texts

3.3 Phonemes

In order to examine the student’s phonological processing abilities based on phonetic principles taught in class, two specific phonemes (ight sound / gh sound) the students found the most difficult to master were chosen as a basis of measuring their skills. At the first reading of the third text, the number of mistakes on these phonemes was quite high (18); however the number of mistakes (6) at the second reading was significantly lower.

<table>
<thead>
<tr>
<th>Mispronunciation of gh sounds</th>
<th>R1</th>
<th>R2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text 3 (all students)</td>
<td>18</td>
<td>6</td>
</tr>
</tbody>
</table>

4. Conclusions

This research revealed that the provision of out-of-class support through the use of an iPod technology-based independent, Repeated Reading instructional technique had an impact on English SpLD students’ Oral Reading Fluency. Student automaticity (speed and accuracy) increased over the period of the iPod project, the prosodic features of students’ fluency, including pronunciation of specific phonemes, improved. However, this impact was less than the one on English for Specific Purposes students of the same university who were not SpLD students (Papadima-Sophocleous, et als. 2012). Further research needs to be carried out in this area to be able to come up with more general results.
5. References


Global perspectives on Computer-Assisted Language Learning
Glasgow, 10-13 July 2013

Using phenomenography to compare the variation of language teachers and learners’ attitudes towards Computer Assisted Language Learning

Antigoni Parmaxi*9
Cyprus University of Technology
Limassol, Cyprus

Stelios Kyriacou
Cyprus University of Technology
Limassol, Cyprus

Kostas Stylianou
Cyprus University of Technology
Limassol, Cyprus

Panayiotis Zaphiris
Cyprus University of Technology
Limassol, Cyprus

Salomi Papadima
Sophocleous
Cyprus University of Technology
Limassol, Cyprus

Abstract

The increasing use of new technologies in the language classroom is constantly altering the way teachers and learners experience language learning and teaching. The new possibilities that technologies bring into the language classroom need to be further examined primarily by exploring the ways in which learners and language instructors ascribe meaning to Computer Assisted Language Learning (CALL). This paper focuses on presenting the main findings of a qualitative study using a phenomenographic approach to investigate how language teachers and learners experience, understand and ascribe meaning to CALL. The phenomenographic approach is adopted since it can richly describe the object of study by emphasising the variation in the meaning that is found in the participants’ experiences of the phenomenon. More specifically, the study focuses on exploring learners’ and teachers’ (a) range of conceptions for CALL, and (b) attitudes towards the use of technological means in language learning. Briefly, students and teachers’ approaches and attitudes towards CALL are analyzed separately in order to comparatively examine their views and provide constructive feedback to enhance the learning process.

Keywords: phenomenography; teacher attitudes; students attitudes; CALL ignorance; CALL awareness

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* Corresponding author. Email: antigoni.parmaxi@cut.ac.cy
1. Introduction

It has been argued that the rapidly increasing use of computer technology in the language classroom brings new potential and possibilities in language learning and teaching (Gamper and Knapp, 2002). Research about students’ and teachers’ attitudes towards computer-assisted language learning in general (Ayres, 2002) or towards a specific technology (Kraemer et al., 2009; Mahfouz, 2010) reveal a positive overall contribution. Based primarily on small-scale studies, the research to date shows that students and teachers are in favour of using technology in the language classroom, as well as perceiving the benefits of its use for enhancing language competence (Varley, 2009; Mathews-Aydinly and Elaziz, 2010). Comparative studies exploring instructors’ vis-à-vis students’ attitudes and perceptions towards CALL reveal contradicting results. Wiebe and Kabata (2010) demonstrated that there is a gap between the students’ awareness of the instructors’ goals for using new technologies and the importance instructors place on CALL. Additionally, results also yielded a difference between students’ reported use of CALL and instructors’ perceptions of students’ use of CALL, as well as between the types of technologies instructors and students thought were useful for successful instruction. Thus, in a highly technology-oriented educational system, CALL remains a phenomenon for which one can draw conflicting conclusions.

2. Methodology

The objective of this study is to investigate the range of perceptions students and teachers have on CALL. It is a qualitative study conducted through semi-structured interviews, which is the main instrument of phenomenography. The primary assumption of this method is the existence of a finite number of qualitatively different ways of perceiving a particular phenomenon (Souleles, 2006). The output of phenomenographic research consists of hierarchically arranged categories of description of the various conceptions of a phenomenon (Souleles, 2012). According to Souleles (2012), “phenomenography entails the empirical study of the different ways in which people experience, conceptualise, realise and understand aspects of the world around them” (p. 467).

Data was gathered through semi-structured interviews with 15 undergraduate students (7 male and 8 female) from five different research disciplines (engineering, fine and applied arts, media studies, geotechnical and health sciences) at different years of their study, and 12 language instructors (1 male and 11 female) in a public university in Cyprus. Considering the small number of interviewees, this is not an exhaustive study but rather a limited investigation that reflects on the dimensions of the particular context. Individual interviews lasted between fifteen to forty-five minutes and concluded when participants indicated that they had nothing more to state in relation to the interview questions. The set of questions was piloted with a number of learners within the same institution. Interviews were tape-recorded and notes were kept, which form the raw material for this study. During analysis, the interviewee responses were classified into categories and each distinct way or theme in which the interviewees conceived and considered different elements of CALL was noted. This is the referential aspect of the analysis (what). At a second level of analysis, we focused on outlining how each theme was conceptualized by the interviewees (structural aspect of each thematic category). The replies comprised the conceptions expressed, and form distinctive categories that are mapped in the outcome space.

3. Categories of conceptions and outcome space

3.1. Students’ and instructors’ experiences of CALL

Without exception, all teachers stated that they use a wide range of technologies in their teaching. For both teachers and learners it was possible to distinguish different groups of technologies used in terms of their orientation and purpose. The types of technologies that encapsulate instructors and students experiences of CALL are listed in Table 1.
Table 1: Instructors’ and students’ experiences of CALL

<table>
<thead>
<tr>
<th>Instructors’ experiences of CALL</th>
<th>Students’ experiences of CALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Learning Management System</td>
<td>1. Computer Mediated Communication (CMC)</td>
</tr>
<tr>
<td>2. Computer Mediated Communication (CMC)</td>
<td>2. CALL glossing (L1, audio, pictural)</td>
</tr>
<tr>
<td>3. Social networking</td>
<td>3. Learning software</td>
</tr>
<tr>
<td>4. CALL glossing (L1, audio, pictural)</td>
<td>4. LMS</td>
</tr>
<tr>
<td>5. CALL software</td>
<td>5. Generic software and information on the web</td>
</tr>
<tr>
<td>7. Generic software and information on the web</td>
<td>7. No experience of technology use</td>
</tr>
<tr>
<td>8. Generic multimedia resources</td>
<td></td>
</tr>
</tbody>
</table>

3.2. Students and teachers attitudes towards CALL

This study revealed five distinct categories of students’ attitudes towards CALL (Table 2), ranging from technology-dominated lessons and high awareness of CALL to the complete dismissal and ignorance of technology use in language classroom.

Table 2: Students attitudes towards CALL

<table>
<thead>
<tr>
<th>A. Usefulness of technology-dominated lesson</th>
<th>B. Importance of technology-oriented lesson</th>
<th>C. Technology and traditional methods are useful</th>
<th>D. Technology is useful but traditional methods are preferred</th>
<th>E. Not useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referential Aspects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invent the meaning of language</td>
<td>Learn in a more entertaining and interesting manner</td>
<td>Variety of material that make the lesson more interesting</td>
<td>Technology provides access to information but cannot replace the teacher</td>
<td>Inability of computer to replace teacher</td>
</tr>
<tr>
<td>Structural Aspects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

With regard to teachers, this study revealed four distinct categories of their attitudes towards CALL (see Table 3), ranging from the importance of technology use within an appropriate pedagogical framework to preference for traditional teaching methods at the expense of technological tools.
Table 3: Teachers attitudes towards CALL

<table>
<thead>
<tr>
<th>A. Regulated by the right pedagogical framework</th>
<th>B. Integral part of teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. Assistive</td>
<td>D. Useful but traditional methods are preferred</td>
</tr>
</tbody>
</table>

Referential Aspects

<table>
<thead>
<tr>
<th>Pedagogy should guide the use of technology</th>
<th>Technology is an integral part of everyday life, including teaching and learning</th>
<th>Technology may facilitate learning but is not a panacea</th>
<th>Traditional methods allow teacher to have complete control on students’ learning</th>
</tr>
</thead>
</table>

Structural Aspects

4. Discussion

Students’ and instructors’ experiences and attitudes towards CALL vary from complete ignorance and depreciation of technological means to high levels of awareness and appreciation of their value in the language classroom. It is worth noting though that where there is agreement between teachers and students, this is based on the perceived educational benefits of CALL in terms of enhancing authentic language use and language competence in general. Overall, students’ and instructors’ experiences of CALL tend to be consistent and adopt a shared positive stance towards the use of technology for learning and teaching.

5. Conclusions

This study has provided an overview of learners’ and instructors’ attitudes towards CALL. This compilation of outcomes provides practitioners, policy-makers and managers with an overview of the challenges they face when endeavouring to incorporate technology in the language classroom, and thus they may implement different policies to overcome implementation challenges.

6. Acknowledgements

We are grateful to Dr. Nicos Souleles at Cyprus University of Technology for his generous support during the early stages of this study.

7. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Charting recent development in Computer Assisted Language Learning

Antigoni Parmaxi
Cyprus University of Technology
Limassol, Cyprus

Panayiotis Zaphiris
Cyprus University of Technology
Limassol, Cyprus

Salomi Papadima-Sophocleous
Cyprus University of Technology
Limassol, Cyprus

Andri Ioannou
Cyprus University of Technology
Limassol, Cyprus

Abstract

This paper charts the research development in Computer Assisted Language Learning (CALL) by building a framework of existing research work in the field. Based on a corpus of 163 articles, published between January 2009 and September 2010 in four major journals devoted to CALL, it sets out to describe the range of topics covered under the umbrella of CALL. The approach adopted in this research includes (a) development of the 2009-2010 CALL corpus; (b) literature overview and extraction of codes from the 2009-2010 CALL corpus; (c) refinement of the extracted codes through focus group and construction of the CALL chart Version 1.0 based on the elaborated coding scheme; (d) refinement of the CALL chart Version 1.0 following a systematic approach of content analysis and development of the CALL chart Version 2.0; and finally (e) card sorting evaluation of the proposed structure and inclusiveness of all categories in the CALL chart Version 2.0, which lead to (f) the development of the CALL chart Version 3.0. The research trends in the major categories of the CALL chart are discussed, as well as possible future directions in the field.

Keywords: Computer-Assisted Language Learning; taxonomy; chart; map; content analysis; card sorting

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1. Introduction

For more than two decades now, the term CALL has been the subject of strong opinions and debates pertaining to the development and use of technology in language learning and teaching (Levy & Hubbard, 2005). CALL is

10 Email: antigoni.parmaxi@cut.ac.cy
interdisciplinary in nature, drawing on emerging practices from other fields, such as Second and Foreign Language Acquisition and Teaching, Pedagogy, Instructional Technology, Technology Enhanced Learning (TEL), Psychology and Human Computer Interaction (HCI). The breadth of topics undertaken in the field of CALL has already been recognised by researchers (cf. Chambers, 2010; Levy, 2000; Stapleton & Collett, 2010); however issues of coherence within the CALL research need to be addressed. Levy (2000) considers the issue by researching articles published in books and journals in 1999, and illustrates that it is possible to detect clear patterns in the goals and directions of the CALL research and practice. More than a decade after Levy’s study, advanced technologies, such as mobile technologies and social media, are driving new directions in the field, which the CALL community did not even imagine a decade ago.

In order to explore the current state-of-the-art in the field, this paper adopts a systematic approach for reviewing the existing research and results in the development of the CALL chart, which provides a holistic view of the field and sheds light in the current and future directions of research.

2. Method

The work presented is the output of a six-stage process (see Figure 1) that includes (a) development of the 2009-2010 CALL corpus which comprises of 163 manuscripts published between January 2009 and September 2010 in four major journals devoted to CALL; (b) literature overview and extraction of codes from the 2009-2010 CALL corpus; (c) refinement of the extracted codes with the help of a focus group and construction of the CALL chart Version 1.0; (d) refinement of the CALL chart Version 1.0 following a systematic approach of content analysis and development of the CALL chart Version 2.0; and finally (e) evaluation of the proposed structure and inclusiveness of all categories using the card sorting technique in predefined categories and (f) development of the CALL chart Version 3.0. Similar methodologies to the ones used in this study have been used in the past in the field of Human Computer Interaction (cf. Zaphiris, Kurniawan, & Ghiawadwala, 2006).

3. Discussion

The chart includes 11 topics related to CALL (see Figure 2). The first and broadest category is headed “CALL applications in support of language skills and other competences”. The research goal of the manuscripts included in this group is to make use of CALL applications, namely multimedia, web-based, or other tools, and investigate their affordances in enhancing the four basic language skills and other generic skills or competences. The following category entitled Computer Mediated Communication draws an interesting division along two main dimensions: time—synchronous, asynchronous and mixed—and modality—text, audio, video and mixed. The manuscripts included in this category explore the usage of these three modalities and their affordances in the language classroom. In the category “attitudinal studies”, researchers’ focus is on students’ and instructors’ attitudes, perceptions and emotions on the use of new technologies or on their general experience in language learning. The next category, entitled “second language instructional material”, includes studies which aim to (a) discuss the benefits, affordances and constraints of second language materials, namely online programmes, software, textbooks and generic applications; (b) outline design issues, namely enumerate the phases involved in designing, developing and implementing valuable and effective language materials; and (c) evaluate this...
material with respect to its linguistic and interactional features or with respect to its effectiveness in improving learning outcomes. The following category entitled “Intelligent CALL (ICALL)” is conceptualised as “an approach to CALL that makes use of sophisticated programming techniques that mimic human intelligence” (Davies & Riley, 2012, entry ICALL). The main programming technique that underlies the development of ICALL is Natural Language Processing (NLP), while the use of other programming techniques are also present in the literature. The research goal of the manuscripts included in this group is to provide examples of such systems and discuss their affordances in language learning. The next category, entitled “innovative technologies in language learning”, explores the affordances of virtual learning environments and mobile devices in language learning, often in comparison with other instructional means—computerised or traditional. The next category is entitled “language learners’ variability” and includes studies pertaining to the effects of learners’ individual differences, namely motivation, intelligence, receptiveness, environment and gender, on their learning performance, as well as the role of learner training in language learning. The following category, entitled “language teachers’ training”, is concerned with the shortage of resources in the area of preparation of language teachers for online language teaching and the need for language teachers to develop new competences in the era of new technologies. The employment of computer as a tool for assessing students’ progress is the main focus of the manuscripts in the next category entitled “Computer Assisted Language Testing”. Major importance is placed on the development of online tests, but also the scoring validity of such tests is explored. The last category is entitled “CALL hybrid research” and combines two or more topics from the chart’s categories.

Figure 2: The CALL chart Version 3.0.

4. Conclusions

This study has adopted a six-stage process for the development of the chart of CALL research. The chart illustrates not only the breadth of topics with which CALL researchers are concerned with, but also the existence of common patterns and orientations amongst them. The CALL chart reveals topics that have attracted researchers’ attention for more than a decade, namely CMC, CALL materials and CALL applications in support of language skills and other competences, which have maintained their public profiles since Levy’s study (2000).

CALL development has seen a tendency towards new emerging technologies that can be used in and out of class. The potential of web 2.0 technologies, mobile devices and virtual learning environments exceed the expectations of many researchers and instructors. Like other emerging technologies, they are still trialled in a pilot basis so as to explore their affordances in and out of language classrooms.

5. References


Global perspectives on Computer-Assisted Language Learning

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Using mobile technologies to promote authentic oral language learning and new forms of language assessment

Martine Pellerin
University of Alberta
(Campus Saint-Jean)
Edmonton, Canada

Abstract

The adoption of mobile technologies into the language classroom is contributing to a pedagogical shift in language teaching and learning. In particular, educators are starting to contemplate the potential of emergent mobile technologies to support authentic use of the oral language as well as new forms of language assessment. This paper examines the use of mobile technologies such as iPods and tablets in promoting the development of oral language competencies in the language classroom. It also explores the contribution of these ubiquitous technologies in gathering tangible evidence of students’ learning, which in turn promotes the emergence of new means of language assessment. The paper is based on several collaborative action research projects involving French language teachers and their students from elementary schools in a western province of Canada. The data collection involved digital ethnographic observation in the classroom, students’ artifacts (examples of students’ use of iPods and tablets), and interviews with teachers and students. The findings show that the use of iPods and tablets provide more authentic and frequent experiences in using the target language, and has positive outcomes on the development of oral language skills. The findings also reveal that the digital documentation (audio and video recording) of language learning contributes to making the language learning process more visible to teachers and students. This process of revisiting the digital documentation constitutes a new means of oral language assessment. Moreover, the use of mobile technologies allows language learners to become ethnographers of their own language learning and assessment process.

Keywords: mobile technologies; oral competencies; second language assessment; iPods and tablets; audio and video recordings; digital documentation

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1. Introduction

Although researchers and language teachers agree on the importance of oral practice in the language classroom, students often lack opportunities to practice speaking in the target language. Voice technologies such as Skype, Voicethread, and Audacity support task-based speaking practice (Pino James, 2010; Sun, 2009). Ubiquitous mobile technologies such as iPods and iPads, which provide multimodality tools including voice and video, hold great potential for supporting oral task-based activities to further promote the development of oral language
competencies in the classroom. These mobile technologies also allow the gathering of visible evidence of students’ language learning, which in turn contributes to new modes of language assessment.

2. Method

Informed by a qualitative, interpretative research methodology (Denzin & Lincoln, 2008), the study made use of collaborative action research (CAR; Pellerin, 2011) for a systematic inquiry into how the use of iPods and iPads can promote oral language competencies and new forms of assessment for language learning. The CAR projects involved Early French Immersion teachers and their students from elementary schools in a western province of Canada. Data collection included digital ethnographic observation in the classroom, students’ artifacts (examples of students’ use of iPods and tablets), and interviews with teachers and students.

3. Discussion

Several key themes emerging from this inquiry further our understanding about how the use of mobile technologies such as iPods and tablets promote oral language learning and new forms of language assessment in the language classroom.

3.1. More authentic and frequent experiences in using the target language

The mobile devices allow students to record their voices while speaking during task-based language activities. Instead of responding to oral exercises on a software program, students can engage in authentic oral task-based activities while working alone, in pairs, or in small groups. Oral activities with the use of iPods and tablets included providing directions to finding a “treasure”; recording a description of a picture (which another student would listen to and try to draw the picture); telling a story based on sequential pictures; or retelling a story the students have read. Students also made video recordings of puppet shows, TV-inspired role plays, demonstrations of how to make things, and how to dress for winter in Canada. Students were able to make their own audio and video recordings, listen to and/or view the recording immediately afterward, and decide whether or not to redo the task.

Several voice apps on iPods or tablets allowed students to create animated movies. Using the Puppet Pals app, students as young as Grade 1 (six years old) created a puppet show about a princess and a dragon in the target language. Voice apps such as Show Me allowed students to annotate their voice recordings, and to demonstrate their understanding of a concept by using a drawing to support their oral answer to a question.

3.2. Promoting the development of oral language skills

The use of iPods and iPads allows students to record and revisit their use of the oral language in various activities through audio and video recordings. The revising process allows students to become aware of their strengths as well as any gaps (Schmidt, 2010; Swain & Lapkin, 1995) in their oral competencies in the target language. Students develop metalinguistic awareness through conscious reflection about their use of the target language. Students in the study became aware of gaps in their French vocabulary when describing a picture or providing step-by-step instructions (e.g., how to blow a bubble with bubble gum). Even young and novice students were able to identify grammatical errors in their own speech (“mon maman” instead of “ma maman”). During pair work, students were able to provide scaffolding for each other by suggesting French words during an activity, or by pointing out the wrong choice of word while their partner described a picture (“La lune . . .” “Non, c’est le soleil”).

3.3. Making the language learning process more visible to teachers and students

The use of mobile technologies renders language learning visible through digital documentation (audio and video recordings), providing the learner with new means of oral language self-assessment. By revising their own “traces” of the use of the oral language, learners engage in a metacognitive process through self-reflection about their oral competencies in the target language, and self-regulate their own language development.

The digital documentation contributes also to a changing paradigm regarding assessment on the part of the language teacher. Digital documentation promotes not only assessment of learning but also assessment for learning (Davies, 2000) by putting a greater emphasis on the learning process rather than on outcomes. Thus the
teacher becomes aware of the specific needs of each individual language learner and is able to provide the necessary scaffolding to support the development of students’ oral competencies.

4. Conclusions

The integration of technologies in language learning involves a paradigm shift in second language teaching (Guichon, 2012; Pellerin, 2012a, 2012b). To foster the development of oral competencies among language learners, language teachers need to adopt new pedagogical approaches that emphasize student-centered and “student talk” approaches. Teachers also need to privilege pedagogical strategies that provide authentic and frequent opportunities for oral language activities (Warschauer & Meskill, 2000).

Making oral language competencies visible through the process of documentation enables a revisiting process as a formative assessment that informs both teachers and learners (Pellerin, 2012a). The use of mobile devices in the language classroom supports and promotes a major shift in student assessment, not only by placing students at the center of their learning process, but also by allowing them to become responsible and accountable for their own language learning progress.

5. Acknowledgements

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6. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

A pervasive language learning environment: The European Digital Kitchen

Anne Preston
Newcastle University
Newcastle, UK

Paul Seedhouse
Newcastle University
Newcastle, UK

Abstract

This paper reports on the research activities of an on-going European Union-funded project, ‘Learning languages, cultures and cuisines in digital interactive kitchens’ (LanCook), which develops the application of digital sensor technology together with a Task Based Language Teaching (TBLT) approach to create a pervasive language learning environment. The principle objective of the project is the creation and use of multilingual task-based language learning materials for learners to cook dishes linked to 7 European cultures and countries: Catalan, English, Finnish, French, German, Italian and Spanish. The materials use digital sensor technology to promote a genuinely situated language learning experience of a real-world activity. The pedagogical design of the materials means that learners are able to learn aspects of European languages whilst performing a meaningful real-world task and simultaneously experience the cultural aspect of learning to cook a European dish.

This focus of this paper is on outlining the different processes involved in the creation of technologically enhanced language learning materials using sensor technology from pedagogical and technological design to initial findings from data collected so far as part of a year-long trialling phase.

Keywords: Task Based Language Teaching; situated language learning; materials design; European languages

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1. Introduction

Learning foreign languages offers rich rewards including improved cultural understandings, communication abilities and job prospects. However, in recent years, the European Union has acknowledged that Europe faces specific challenges regarding increasing foreign language proficiency, an area that impacts the EU economy (European Commission, 2008).

LanCook is a European-wide collaboration (5 countries) which engages with some of the major challenges concerning how to increase foreign language proficiency, language skills in the EU as well as how recent developments in digital technology can enhance approaches in CALL (http://europeandigitalkitchen.com). The
The project does this by drawing on Task-Based Language Teaching (Skehan 1998; 2003) and through an innovative combination of cooking and digital technology. Beginning in December 2011, LanCook involves the creation and use of multilingual task-based language learning materials for learners to cook dishes linked to 7 European cultures and countries: Catalan, English, Finnish, French, German, Italian and Spanish.

The materials are designed to be used with a ‘portable kitchen’, which uses sensor technology (similar to the Nintendo Wii™) to lead learners step by step through the cooking of a dish. Embedded digital sensors are inserted in or attached to all the equipment and ingredients allowing the kitchen to detect and evaluate activity as learners progress through their cooking tasks (Hooper et al, 2012). As the kitchen is able to detect what users are doing, it can provide help along the way through a range of audio messages, pictures and video. There is also the option to gain more details about a certain cooking action. As an interactive activity, learners are also able to communicate with the kitchen. The pedagogical materials are stored as a software programme in a portable tablet PC and comprise of an integrated suite of materials for cooking preparation.

Figure 1: The touchscreen, interaction tools and some utensils with sensors that make up the portable kitchen

2. Method

The project is organised into a number of phases moving from materials design, creation, trialing and implementation to modification. As research and development-oriented activities, each of these phases addresses specific practice-based research questions:

**Design phase:** Which components of Task-Based Language Learning are relevant to the pedagogical design of language learning and cooking in a situated learning environment of a kitchen? What are the technological affordances and constraints of using digital sensor technology for use with language learning and cooking in a situated learning environment of a kitchen?

**Creation phase:** How does the pedagogical and technological design of the kitchen impact on the selection, building and programming of recipes to be used in the digital kitchens?

**Trial phase:** What aspects of European Languages are acquired in the digital kitchens by individual learners? What is the impact of the design and creation decisions on how learners perform the task of cooking in the digital kitchen? What is the relationship between individual learning outcomes as a product and the how learners performed the task in the digital kitchen as a process?

**Modification phase:** Based on the findings of the trialing phase, what elements of the pedagogical and technological design of the materials mostly supported learners in the completion of the cooking task, and which ones did not?

3. Discussion
A series of participatory design workshops took place in June 2012 in Newcastle, UK, where the project members, language teachers and applied linguistics experts, worked closely together with computer technologists to finalise a merged pedagogical and technological framework for the design.

A smaller team of project members made up of a computing technologist, programmer and a language learning researcher worked together to create an authoring tool which reflected the collaboratively produced design decisions. The tool was successfully piloted with other project members and the first versions of the materials were created in each of the 5 countries.

Following a period of piloting where learners were observed using the materials and some changes were made to the recipe programming, the trials began. The project is currently running at least 125 trials involving a minimum of 250 learners across 5 countries. Learners are invited from adult, higher and vocational education learning contexts as well as immigrants and overseas students. Data collected during the trials include audio-video recordings, pre-post and delayed vocabulary test data, self-reports on using the digital kitchens and learner biographical information.

The trailing phase will lead to findings that will be incorporated into a modified design ready for dissemination and exploitation.

At this interim point in the research, we are able to point to a number of initial ways in which key design decisions impact on how the materials are approached and used by learners. Two overriding features linked to the use of the digital sensors are coming to light: first, the notion of accompaniment, how the digital kitchen and the users come to work in tandem as a partnership to complete the cooking task, and second, how the digital kitchen is able to encourage active participation with the task and between the users.

4. Conclusions

Our initial findings contribute to on-going debates over the role of technology in language education generally and CALL more specifically. As technologies in these areas offer increased learning opportunities, should they support traditional CALL paradigms, or can and does the innovative use of novel technologies such as the European Digital Kitchen require a new pedagogy?

5. Acknowledgements

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6. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Multimodal interfaces: Blending gaze, gesture, movement and speech to overcome the limitations of keyboard, mouse & touchscreen

Karen Price
Boston University
Boston, USA

Abstract

During natural multimodal communication, we speak, gesture, gaze and move in ways that bear little resemblance to the traditional click-and-type/touch interfaces so common in stand-alone language learning software. Although multimodal interfaces which process two or more combined user input modes, (e.g. speech, pen, facial expression, hand gesture), are being created for various content domains, they are not yet common in stand-alone CALL applications. Multimodal interfaces can process a user’s gestures and speech simultaneously in order to shape the real-time listening behaviour of a virtual agent, or to adapt the presentation content as the user’s facial expressions change, or enable seamless two-way conversations between the user and an onscreen character that reflect physical gestures and spoken responses of the learner.

The author reviews, analyzes and discusses short video clips demonstrating the capabilities of a variety of multimodal interfaces designed for commercial and academic applications, and offers an agenda for further research in light of selected relevant research in applied linguistics, gaming, and the behavioural sciences. The purpose of this study is to promote further research concerning the possibilities and significance of a user’s multimodal output in language learning applications. It is hoped that these emerging technologies and new research agenda will assist in reformulating research on multimedia—reframing the traditional study of multimodal output in terms such as text, graphics, audio, video in favor of a framework which considers specific components of multimodal input in terms such as emotion present/detected in speech, the user’s gestures, gaze, etc.

Keywords: multimodal interfaces; gesture; gaze; speech; emotion-detection; eye-tracking; haptics; handwriting-recognition.

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1. Introduction

How do we convey what we intend to say through spoken language? Human-to-human communication depends upon and integrates gaze, gesture, movement and speech. Speech is often accompanied by multimodal cues, such as gestures, eye gaze, and facial expressions. These cues play an important role in the way we communicate with others and convey crucial information for understanding the intentions of others.

While virtual language learning spaces may offer multimodal opportunities for learners to communicate with each other (e.g. audio-/video-conferencing with the integration of textual and graphical material), multimodal interfaces for autonomous language learners are not yet common. However, multimodal interfaces for stand-alone applications do exist for a variety of purposes and in a variety of content domains outside of language learning.

2. Discussion

These multimodal interfaces can process a user’s speech, hands, facial expression and whole body together in order to control and determine software interactions. For example, as video characters speak, children can participate in onscreen activities by verbally responding and interacting in intuitive, physical ways by jumping, moving forwards or backwards, catching and throwing balls. The child may see an onscreen character catching her imaginary balls while the character counts aloud how many balls the child has thrown. Two-way conversations between the child and an onscreen character can be triggered in response to the child’s physical and spoken responses to questions and suggestions.

Other research and applications involve the processing of user-generated speech and non-speech sounds, in parallel with the user’s gaze, which can generate appropriate listening behavior for a conversational virtual agent, triggering backchannel signals according to the user’s visual and acoustic behavior (Bevacqua, De Sevin, Hyniewska, & Pelachanud, 2012).

Traditional software simply notes “time-on-task” and tallies clicks. Multimodal software can incorporate existing technology to detect underlying behaviors from which emotional and attentional states of the learner can be surmised (D’Mello & Graesser, 2010). For example, emotion-detection algorithms allow applications to understand individuals’ mood, attitude, and decision-making characteristics as they speak.

Other types of applications can enable the tracking of a user’s gaze. Tracking eye movements and eye-movement recording provides empirical evidence of attentional processes and information about what a person is doing when they are reading a text, watching a video or searching a screen (Roberts & Siyanova-Chanturia, 2013). Well-designed multimodal interfaces can be designed to provide information to teachers and designers as to a student’s emotional and attentional state at specific moments in using software. Research indicates that children, as well as non-native speakers, are quite capable of conveying a great deal of information through gesture that they are not yet able to articulate. For example, Crowder (1996) found that children used deictic (pointing) and iconic (representational) gestures to explain concepts such as the earth’s rotation around the sun. The children’s gestures conveyed information essential to how the teacher tailored feedback to the student.

Using traditional keyboard-and-mouse technology to assess comprehension may require a student to select a multiple choice answer, type a short answer, or drag-and-drop an illustration. Well-constructed multimodal interfaces can be designed to allow students to use both speech and gesture in order to provide feedback that assists a teacher in determining a student’s underlying competence in certain domains.

When speech and gesture are processed together, each modality most often communicates complementary rather than redundant information. Multimodal interfaces do not simply offer the option of using a different mode or channel of communication (e.g. speak versus clicking a button versus writing), but their use enables the cross-modal synchronization of timing and meaning that is evident in human-human communication. Additionally, studies document significant improvement in the recognition of speech from accented L2 speakers when multimodal input is processed simultaneously (Oviatt, 2008).

3. Conclusions

To date, there has been more focus in the field of CALL on multimodal output (e.g. text, graphics, audio, video) than multimodal input (e.g. simultaneous processing of the user’s gesture, gaze, emotion-detection in speech).
Now that the technology and processing capabilities have evolved to more easily permit research involving multimodal input, let us move forward with a CALL research agenda that begins to incorporate more modalities of human-to-human communication, as well as isolate and evaluate specific components of audio (e.g. detection of emotion) and video (e.g. gaze) that may well prove to be more meaningful than the traditional categories of “audio” and “video” in multimedia research.

4. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Teacher narratives: Digital storytelling, methodology and cultural appropriacy

Andrew Prosser
Hankuk University of Foreign Studies
Seoul, South Korea

Abstract

Writing in relation to teaching methodology and cultural appropriacy, Adrian Holliday has called for a more context-sensitive approach when considering the introduction of western teaching methodology in non-western educational scenarios, and believes the development of ethnographic descriptions of local cultural and educational conditions can facilitate this. This presentation describes a set of class materials developed to offer a group of Korean undergraduates taking degrees in education such an anecdotal, contextualized entry-point into this issue. The paper argues that the practice of digital storytelling, in terms of tools and typical content, provides a potential means and template for delivering more anecdotal, ethnographic forms of course content. The project described integrated a collection of audio-visual slideshows featuring interviews with experienced teaching professionals reflecting on their experiences and views on working with western teaching methods in Korean educational contexts. Integrating an interactive, non-linear webpage environment, combining the slideshows with downloadable articles and online discussion forums on each theme, the project aimed to help trainees to develop their own perspectives and follow their own pathways on the issue of methodology and appropriacy, particularly in terms of the specific cultural, educational and institutional contexts within which they will work in the future. Analysis of online discussions provided evidence of the ways in which participants were able to apply higher-end cognitive thinking skills to the views presented in the slideshows, such as evaluating and synthesizing ideas, constructing new concepts, and thinking strategically on the issue of cultural appropriacy and teaching methodology in Korean educational settings.

Keywords: digital storytelling; language teaching methodology; cultural appropriacy

1. Introduction

1.1. Teaching methodology and cultural appropriacy

The potential disjunction between language teaching practices developed in western classrooms and the cultural and practical realities that exist in non-western educational contexts has been an issue highlighted extensively in literature (Ellis, 1996; Holliday, 1992; Holliday, 1994; Jones 1995). In the light of such concerns, Adrian Holliday has argued that the development of culturally-sensitive teaching methodologies needs to be led by
better descriptions of the actual cultural, social, institutional and educational contexts in which learning takes place (1994). In contrast to a theory-led approach to curriculum design, Holliday instead argues for the need to first carry out ethnographical research regarding the specific classroom, to which any teaching methodology should then be able to adapt on a continual basis.

1.2. Teaching methodology and appropriacy in South Korea

Concerns about methodology and the issue of appropriacy have been a cause of debate within South Korea in recent years (Kim, 2004; Shin, 2007, Jeon 2009). The undergraduate English Education program on which the author teaches indeed includes a course that addresses ‘western’ teaching methodology and the question of the appropriacy of such methods in Korean educational contexts. Participants on the course are fourth-year Korean undergraduates working towards a first degree in English language education, which will allow them to work in the secondary state education sector within South Korea.

Although Holliday is writing more from the perspective of curriculum developers and administrators, the idea of developing more ethnographical, context-specific descriptions of classrooms, it was felt, might have value in teacher training, in terms of introducing students to the issues surrounding teaching methodology and cultural appropriacy through the views and experiences of practising teachers working in the country. Such descriptions might also provide more up-to-date, relevant sources of knowledge about language teaching in Korea and the specific social, educational and institutional realities that exist and in which course participants will eventually work.

1.3. Digital storytelling

The problem of how to deliver such content was addressed by exploiting the concept, formats and tools associated with digital storytelling. Digital storytelling involves combining narrative with digital content such as audio, images, video and text (“7 things”, 2007), presenting such stories in the form of video or audio-visual slideshows. Typically, digital storytelling content involves personal, anecdotal forms of storytelling (“The Educational Uses of Storytelling”, 2013), and, perhaps for this reason, has been exploited within higher education as a means to enable more reflective forms of learning (“Digital Approaches”, n.d.). As a result, it was felt that digital storytelling might be a suitable means to deliver the type of anecdotal, reflective forms of knowledge expected to be contained in a set of informal teacher interviews. The tools typically used for delivering digital narratives, as well as providing the means for content delivery (slideshows, the internet), were also understood to be a way of making such content interactive and non-linear. Digital storytelling projects online, for instance, are often embedded within hyperlinked webpages with links to SNSs, allowing users to interact with and discuss story content, as well as interact with each other.

2. Method

2.1. Creating ‘teacher narratives’

Interviews were conducted with both non-native and native speaker teachers of English, each working in different educational contexts working in Korea. Interviewees were asked to relate and describe their working situation and experiences in Korea, being guided particularly towards reflections concerning methodology and appropriacy. It was felt important that teachers working in a variety of contexts should be included, in order to draw students’ attention to the potential differences between various institutional contexts and to avoid potentially over-generalized notions of Korean culture/education. These interviews were recorded and then developed into a series of audio/visual slideshows by the tutor of this undergraduate program and categorised according to the themes of communicative language teaching, autonomy, appropriacy, and institutional contexts.

2.2 Webpage design

The audio/visual slideshows were integrated into a Moodle website, which integrated the slideshows, presentations from face-to-face classes, articles and asynchronous discussion forums. The latter provided the learners the chance to discuss and develop ideas relating to themes raised in the slideshows, and interact with that content. It has been argued that asynchronous forums have a number of positive benefits in terms of making sense of concepts in course content, including fostering in-depth consideration of alternative viewpoints (Berry, 2005), greater opportunities to reflect that may be available in face to face learning (Al Shalchi, 2009), as well as to support high-order constructivist thinking and knowledge construction (Levine, 2007).
3. Discussion

The potential value of discussion boards to enable knowledge construction while interacting with audio-visual slideshow course content were observable in learner discussions on this course. Discussions displayed participants’ ability to demonstrate higher-end categories of cognitive thinking, including:

- Evaluating and identifying possible outcomes, including negative outcomes, of particular assumptions and points of view of teachers in the slideshow in terms of method and cultural appropriacy.

- Suggesting solutions, at a strategic level, to instances of disjunction between method and cultural context identified in discussions.

- Evaluating concepts and assumptions put forward in the slideshows, before constructing alternative concepts which might also reflect and address social and cultural realities in Korean classrooms.

- Developing metaphors to conceptualize particular points of view regarding teaching methodology and cultural appropriacy.

- Deconstructing concepts created by co-participants in order to develop more complex ways of thinking about methodology and cultural appropriacy.

4. Conclusions

Digital storytelling in education has been used primarily for student-created storytelling projects. The value of such a use of digital storytelling is, of course, clear. However, using digital storytelling for content delivery is also perhaps worthy of investigation. In particular, more anecdotal forms of content, such as that developed for this course, may find a suitable channel of delivery through digital storytelling. Moreover, the tools and format associated with digital storytelling (audio-visual media, hyperlinked webpages, discussion facilities) offer the user/learner the ability to interact with that content, in ways that help develop and construct new sets of knowledge and new perspectives.

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Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Using text analysers as an aid to examining the effects of task complexity on academic L2 writing

Erifili Roubou
Aristotle University
Thessaloniki, Greece

Abstract

Recent studies have brought increasing interest to research on task complexity in L2 writing in the field of second language acquisition (SLA) research. This study implements text analysis software as a means of facilitating and encouraging relevant research among educationalists, researchers and language teachers. The study is situated within the Triadic Componential Framework for Task Design (TCFTD) proposed by Robinson (2005), while findings are interpreted in the context of the Limited Attentional Capacity Model (Skehan & Foster 2001) and the Cognition Hypothesis (Robinson, 2005). Twenty-three L2 university students completed a placement test and then were asked to produce two writing tasks whose complexity varied along resource-dispersing cognitive factors. Student writing was analysed for fluency measures, lexical variety, syntactic complexity and the LIX readability index. The aim of the study was twofold. First, to assess the impact of language proficiency on the three areas of interest mentioned. Second, to examine how each of those areas is affected by varying task complexity in terms of cognitive load. The results indicated that both lexical variety and the readability index were significantly affected by language proficiency. In addition, it was found that students produced significantly more fluent writing in the more complex task. In contrast, lexical variety was significantly greater in the simpler, less cognitively demanding task. The findings of the study carry pedagogical implications for syllabus and task designers as well as researchers and language teachers.

Keywords: Second language acquisition (SLA); task-based research; text analysers; academic writing.

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1. Introduction

Over the past decades, researchers in the fields of second language acquisition (SLA) and second language (L2) pedagogy have argued that tasks present a valid unit to sequence the language process, as opposed to linguistically defined syllabi (Robinson, 2005; Prabhu, 1987; Skehan, 1996). A major issue in task-based language teaching (TBLT) is how task characteristics affect task performance. Task difficulty is typically measured on the basis of complexity, accuracy and fluency (CAF) constructs. The current study is situated in Robinson’s (2005) Triadic Componential Framework for Task Design (TCFTD), which is motivated by the Cognition hypothesis (Robinson and Gilabert, 2007) and the Limited Attentional Capacity model by Skehan and Foster (2001). In the TCFTD model, Robinson (2005) suggests that task complexity should form the basis for
proactive pedagogic task sequencing in task-based syllabuses. Task-complexity consists of two key dimensions: resource-directing and resource-dispersing. The model predicts that if the cognitive demands of a task increase along resource-directing dimensions, accuracy and complexity will be affected positively while fluency negatively. Increasing task difficulty along resource-dispersing dimensions will lead to less accurate, less fluent and less complex language production as more demands are made on learners’ attentional and memory resources. On the other hand, the Limited Attentional Capacity model advocates trade-off effects among aspects of language production in more demanding tasks.

Based on those models of task complexity, the following research questions were addressed:

RQ1: How does proficiency in the English language affect fluency, lexical variety, syntactic complexity and the LIX readability index?

RQ2: What are the effects of increasing task complexity on fluency, lexical variety, syntactic complexity and the LIX readability index?

2. Method

2.1. Participants and data collection

The participants of the study were 23 first-year university students in the department of English language and Literature of Aristotle University. At the outset of the study, proficiency in the language was measured using the Oxford Placement Test (OPT). Students were asked to complete two writing tasks under conditions that differed in terms of complexity and cognitive load. The writing genre in question was that of advert analysis, which has not been used before in similar research projects.

In the first task, students were presented with an advert from a magazine. Firstly, class discussion on the intended message and connotations of the advert was initiated (±provision of ideas). Analysis of the typical format of the advert analysis genre followed in order to activate the (±macrostructure) parameter. Students were then allowed ten minutes planning time (±planning) and twenty minutes for writing up. In the second task students were simply presented with an advert and were asked to write an analysis in twenty minutes.

2.2. Data analysis

Tasks were uploaded on UsingEnglish.com, which provides an advanced text analysis tool. Task complexity was studied through measures of fluency, lexical variety, syntactic complexity and the LIX readability index. Fluency was measured in two ways: Fluency I (total number of words) and Fluency II (total number of T-units). Type-token ratios (TTR) were used for examining lexical variation, while mean length of T-unit (MLTU) served as an indicator of syntactic complexity. Fluency I, TTR and the LIX (Laesbarhedsindex) index were all provided automatically by the text analyser, while analysis of Fluency II and MLTU was carried out manually.

3. Discussion

The results presented in this section illustrate the effects of L2 proficiency and task complexity on performance. With respect to the first research question, the results showed that there was a significant effect of level of proficiency at the p<.05 level on the mean length of T-Unit (MLTU2) \( F(2, 20) =4.07, p= 0.033 \) which is an indicator of syntactic complexity, and on the LIX readability index (RI2) \( F(2, 20)=6.89, p= 0.005 \) for the second, more complex task. These findings suggest that students’ proficiency in the L2 significantly affected structural complexity in the second more cognitively demanding task.

Post-hoc comparisons using the Tukey HSD test were conducted to examine between which groups of language proficiency there were significant differences for the MLTU2 and RI2 measures. The results indicated that with respect to MLTU2 the mean score for the B2 level (M= 14.28, SD= 2.88) was significantly different from the score of the C1 level (M= 18.7, SD= 3.67, p= 0.026). This finding suggests a relationship between L2 proficiency and syntactic complexity, as advanced students produced significantly more structurally complex writing than the B2, upper-intermediate level. Considering RI2, significant differences were found again between the B2 (M= 1.57, SD= .535) and C1 levels (M= 2.70, SD= .823, p= 0.006) as well as the C1 and C2 level (M= 1.83, SD= .408, p= 0.048). Since LIX is a readability measure indicating the difficulty of reading a
text, the findings show significant differences in degree of difficulty both between the B2 and C1 levels, and the C1 and C2 levels.

Examing the second research question, analysis showed that there was a significant difference in the total number of words produced between the first, simple task, TW1 and the more complex task, TW2 (t(22) = -2.87, p= 0.009). Significant differences were also found for the total number of T-units which constitutes the second measure of fluency in the study for the two tasks: TTU1 and TTU2 (t(22) = -2.99, p= 0.007). Surprisingly, the more cognitively demanding task led to more fluent production on the part of students. This finding is in agreement with Ong and Zhang’s (2010) study, which also found increased fluency in tasks with increased complexity along resource-dispersing parameters. Examining lexical variety, there was a significant difference in the type-token ratio for the simple task, TTR1 and TTR2 (t (22)= 3.43, p= 0.002). No significant differences were found for MLTU or the LIX index.

4. Conclusion

The results of the present study suggested that syntactic complexity and the LIX readability index can be significantly affected by the level of proficiency in L2 when task complexity is increased. Regarding different aspects of task complexity, both fluency measures were significantly higher in the more cognitively demanding task while lexical variety was significantly higher in the simpler task. The results point towards a trade-off effect between different aspects of written production, which suggests that certain areas receive more attention at the expense of others when students are faced with increased concurrent cognitive load.

The contribution of this study lies not only in the fact that research on task complexity to date has largely focused on oral production but in that studies investigating writing have mainly dealt with resource-directing parameters. Moreover, text analysers are not typically used in studies of task complexity. Hopefully, the introduction of this tool will encourage more educators to carry out research on the topic in their own contexts, as it facilitates the time-consuming process of data analysis.

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6. References


Abstract

This paper is an account of an attempt to set up and sustain a set of four fully online language courses for 500 first and second year university students majoring in computer science. The courses began with first year students in 2010 and were extended to include second years in 2011. The evolution of these courses is informed by two main sources: students’ experiences as recorded in surveys and interviews, and the experiences of the four teachers involved in the process of maintaining the system and courses. This data, which serves to help us improve the courses, is also the data that informs this “mid-term” report. Our findings so far indicate that despite the multitude of hurdles and unfavourable initial conditions that are innate aspects of many online courses, it is indeed possible to set up and sustain online English language learning for a large number of computer science students. At the outset, anticipating some of these issues, we purposefully incorporated a number of features into the courses, which were intended to make them sustainable, afford flexibility to the stakeholders, and foster autonomy amongst the learners. Reflecting the evolutionary nature of this project, having described these features, we will then go on to describe other solutions and workarounds to some of the hurdles and unfavourable initial conditions. In describing these solutions we believe that this paper will be useful to those attempting to incorporate some aspect of online learning into their institutions.

Keywords: adverse conditions; interaction; large-scale; learner readiness; Moodle; non-language majors; obstacles; time

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1. Introduction

This paper describes an attempt to set up and sustain a set of four fully online language courses for 500 non-language majors. These courses, collectively called the Virtual English Program (VEP), have been created and sustained by the authors. The three factors that have had the most significant impact on these courses are: Learner Readiness (Keramati, Afshari-Mofrad, & Kamrani, 2011), Interaction, and Time. Learner Readiness refers to and subsumes four aspects of learners’ preparedness to study online: study skills, ICT skills, collaboration skills (Smith, Ruthven-Stuart, & Johnson, 2012) and motivation. Interaction refers to the nature of teacher-student and student-student contact. Time refers to the amount of time allocated to students and teachers.
to study, and to manage the course, respectively. All three of these factors exist along a continuum. At one end of each continuum lie conditions that are entirely inimical to the sustainability of online programs: no interaction amongst students and teachers, no readiness to learn, and no time to study. Whilst the conditions within which the VEP exists are not at these extreme ends, these three factors do lie towards the non-conducive end of the continua.

These adverse conditions are not unique to the authors’ institution or cultural setting. Indeed, in any level of education, especially the first year of university, where students are required to take ‘foundation’ courses, such conditions are the norm. An understanding of how to overcome, or ameliorate these adverse conditions is vital for anyone attempting to manage online language learning courses. To this end, we will explain how we have designed the VEP so that these three factors have less of a negative impact.

2. Context

The VEP was initially created in 2002 as an offline course. It had various problems, and an alternative was needed. With no possibility of it being converted to a classroom-based course, a fully online version was a logical choice. Students began using it in 2010.

The environment in which the VEP has been created is in many respects suitable for online learning. All students have a notebook computer, there is campus-wide wireless internet connectivity, and Moodle, an open-source learning management system (LMS), had already been used and maintained for several years. Belying this technical preparedness, the university lacks a policy regulating online learning (Bachnik, 2003; Latchem, Jung, Aoki, & Ozkul, 2008; Ozkul & Aoki, 2006). Counterintuitively, this provides the authors with the freedom to be innovative in addressing the obstacles.

3. Method

The primary goal of the VEP has been to provide students with online content based English language courses, and in doing so, comply with Ministry of Education requirements to provide first and second year students with three hours a week of English education. In order to maintain the courses we have collected data on students’ experiences, which in turn have provided us with valuable data for research.

Consonant with our pragmatic approach to language instruction (ODwyer, 2006), we are using mixed-methods to collect data (Creswell & Clark, 2010). The quantitative data comes in the form of pre- and post-course online surveys, and the results of a standardized English language test (the TOEIC Bridge exam (ETS, 2008)), which students sit at the end of their first term and again at the end of their second year, having completed all four VEP courses. Qualitative data is acquired from interviews with students. The final source of information is anecdotal ‘evidence’ from colleagues and students, which serves to suggest new avenues of enquiry and expose possible issues of which we have not been aware. In this brief paper, we will not attempt to report these results. However, this data does inform the following discussion.

4. Discussion

Given that the VEP exists in an environment that is not very conducive to online learning, this may seem like an optimistic undertaking. It is worth considering the choice in the context of possible alternatives. A series of traditional face-to-face classes with similar aims would, in order to be as effective, require substantial human resources. Furthermore, some of the unique and valuable affordances offered by online learning would be lost.

We have attempted to circumvent or at least mitigate the three negative factors by incorporating the following five features into the program.

4.1. Open-source LMS

The VEP courses have been created in Moodle. This has facilitated the development of three custom modules (Ruthven-Stuart, 2012), which have made a significant contribution to their effectiveness. They include:

- Feedback+, which facilitates the grading of groups using a rubric, with detailed results downloadable to a CSV file,
• Quiz Organiser, which enables the teacher to edit simultaneously the settings of all quizzes in a course, and
• An addition to the Quiz module, which applies time-based penalties to quizzes.

4.2. Bottom-up creation & maintenance

The authors have not been restricted in relation to the choice of LMS or the design of the courses.

4.3. Content reflecting majors

The backbone of a VEP course is a series of weekly units, in which students engage in content related to their fields of study (Figure 1). This deepens its relevance and value to the students.

4.4. Content specialists

Each unit consists of a lexically controlled 500-600 word text about an academic subject, and approximately 100 quiz questions. Each was written, to detailed specifications, by experts in that subject familiar with the kinds of students for whom they are intended.

4.5. Elective units

Some elective units were created in order to give students some timetable flexibility and content variety. They include an opportunity to experience some ‘new’ learning resources such as TED talks and Khan Academy lectures as well as get credit for extracurricular English activities.

5. Conclusions

Despite the obstacles, we have successfully managed the four online courses for over three years. This has been made possible in two ways. First, we anticipated some of the issues in advance, and thus purposefully incorporated features and affordances that would offset the negative impacts of the obstacles. Secondly, and in part as a consequence of the features and affordances of the system, we have been able to maintain an agile stance towards issues as they arise.

Certainly, this agile stance has been facilitated by our institution and the culture within which it exists. Our university encourages bottom-up initiation of projects and places few restrictions on what, how and with what we teach. This means we have had a fairly free rein in all matters relating to the VEP courses. However, while recognising that this is a culturally specific characteristic, the reader may wish to consider to what extent an agile stance could be incorporated into your own context. Notwithstanding this peculiarly Japanese characteristic, we believe that the other features we have incorporated will provide the audience with ideas about how they might design and sustain large-scale online courses.

6. Acknowledgements

Finally, we would like to acknowledge our two colleagues, Andrew Johnson and Michiko Nakamura. They have played a significant role in keeping the VEP up and running.

7. References


Figure 1, the 2013 VEP 1 Schedule showing the start and finish dates of the various units and activities.
Assessing proficiency development online
Mathias Schulze
University of Waterloo
Waterloo, Canada

Peter Wood
University of Saskatchewan
Saskatoon, Canada

Abstract
In language courses, students submit more and more outcomes of their text production tasks to discussion boards, dropboxes, blogs, and wikis. We are testing automating certain components of the feedback learners need to receive, by scoring the proficiency level as displayed in the individual student’s text. Proficiency development manifests itself through a nonlinear increase in textual complexity, fluency, and accuracy over time. A detailed multi-faceted proficiency score for written texts, which provides information on the diversity and sophistication of the vocabulary and grammatical constructions, lexical and syntactic accuracy, and appropriate text length, is useful knowledge-of-result feedback for students and enables them to notice learning gaps in future text production tasks, provides pertinent information about the student’s L2 development to the instructor as well as supplements their own feedback, and presents relevant data for second-language development research.

We use computational algorithms that calculate the probable accuracy of lexical and grammatical constructions. The human language technology employed includes a large learner corpus, spell checker, (non-)annotated corpora, part-of-speech taggers, chunkers, and machine learning packages. Using the information provided by these NLP tools to evaluate orthography, structure of words, and combinations in which words can occur we arrive at a gradient score for the accuracy of the learner text using simple computations.

Keywords: ICALL; proficiency; accuracy; feedback; automatic scoring

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1. Feedback on proficiency development in online writing

Students frequently submit text production outcomes online. In addition to the peer and instructor feedback, we work on utilizing computers to provide supplementary contingent feedback regularly to support students’ proficiency development. We measure individual proficiency levels as depicted in students’ texts and plan to use these data to provide students with preemptive feedback (Heift, 2013), i.e. help them focus on particular aspects of their proficiency development (e.g., range of vocabulary and/or constructions, text length, proof-reading for accuracy) when they embark on the next writing task. A multi-dimensional proficiency score for written texts, which provides information on the diversity and sophistication of the vocabulary and grammatical constructions, lexical and syntactic accuracy, and appropriate text length, is useful knowledge-of-result feedback for students and enables them to notice learning gaps in future text production tasks, provides pertinent information about the student’s L2 development to the instructor as well as supplements their own feedback, and presents relevant data for second-language development research (Verspoor, De Bot, & Lowie, 2011).
2. Assessing proficiency development

Proficiency development manifests itself through a nonlinear increase in textual complexity, fluency, and accuracy (CAF) in learner texts over the course of a semester or longer. Texts whose lexico-grammatical patterns are less foreseeable are more complex. Conversely, texts that adhere closer to L2 speech community expectations are more accurate. Longer coherent texts produced in the same time or task context indicate a higher fluency. In our computational analysis of textual surface indicators of CAF, we operationalize fluency as the number of word forms per text and task unit (Chander, 2003; Leal, 2005) and define balanced complexity (see Schulze, Verspoor, & Wood, forthcoming) as a four-dimensional measure (Table 3).

Table 3: Four dimensions of balanced complexity

<table>
<thead>
<tr>
<th>Lexical sophistication</th>
<th>Mean Word Length</th>
<th>( MWL = \frac{l}{w} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lexical diversity</td>
<td>Guiraud’s Type-Token Ratio</td>
<td>( GTTR = \frac{t - 1}{\sqrt{w}} + 1 )</td>
</tr>
<tr>
<td>Grammatical sophistication</td>
<td>Mean Period Unit Length</td>
<td>( MPL = \frac{w}{p} )</td>
</tr>
<tr>
<td>Grammatical diversity</td>
<td>Unique Bigram Ratio</td>
<td>( UBR = \frac{u - 1}{\sqrt{w - 1}} + 1 )</td>
</tr>
<tr>
<td>Balanced complexity</td>
<td>( CB =</td>
<td></td>
</tr>
</tbody>
</table>

\( l = \# \text{letters}, w = \# \text{word forms}, t = \# \text{word form types}, p = \# \text{period units (sentences)} \), \( u = \# \text{unique bigrams (types of two-word sequences)} \), \( D = \{ MWL, GTTR, MPL, UBR \} \)

3. Measuring accuracy levels of texts

Here, our focus is on automated accuracy measures, which are needed because: (1) we are using a learner corpus—3181 learner texts with 305,794 words from three different online German-language courses over three semesters—for which only a computational analysis is feasible; (2) a speedy analysis of learner texts submitted online is one prerequisite for providing contingent individualized feedback. We score the level of accuracy of a text holistically. Accuracy is thus seen as a gradient feature (more/less correct). In this context, we view grammar as the emergent knowledge of conventionalized meaning-form pairings (constructions)—a lexicon-syntax continuum. Therefore, it is not a binary decision about what is accurate or inaccurate; rather we aim to determine—with some probability—how accurate a particular word, sentence, or text is. Gradient accuracy cannot be measured in absolute terms, but it can be ranked and is cumulative (Sorace & Keller, 2005): many “small” inaccuracies weigh more than a single “large” inaccuracy.

Since accuracy measures how far a construction—word, sentence, and text—meets the conventionalized readers’ expectations, we compare students’ constructions to constructions in reference lists and corpora. For this purpose, we compiled a small corpus of the sentences the students will have seen in the courses’ textbook package (Lovik, Guy, & Chavez, 2002). We also use the Free German Dictionary (Schreiber, 2013) and calculate the edit distance (Levenshtein, 1966; Левенштейн, 1965) to determine the level of lexical accuracy and the part-of-speech sequences of the TIGER corpus 2.2 (Brants et al., 2004) to determine the level of grammatical accuracy. After pre-processing and tokenizing the learner texts, they are analyzed for part-of-speech (POS) with the Stanford tagger (Toutanova, Klein, Manning, & Singer, 2003).

In our computational text analysis, we check for both lexical (AL) and grammatical (AG) accuracy and estimate their levels. The algorithm is sketched below:

1. Determine the degree of lexical accuracy for each word by obtaining the highest possible score:
   a. Word found in dictionary look-up: \( AL = 1.0 \);
   b. Truncated word found: \( 1.0 > AL > 0.59 \) (depending on size of truncation);
   c. Spelling alternative of the word found: \( 0.51 > AL > 0.1 \) (depending on edit distance);
   d. Not found: \( AL = 0.1 \)
2. Determine the degree of grammatical accuracy for each sentence by obtaining the highest possible score:
   a. Sentence match found: \( AG = 1.0 \);
b. Percentage of bigrams found in the sentence: $1.0 > AG > 0.5$;

c. POS pattern found in TIGER: $0.5 > AG > 0.1$ (depending on proportional pattern size)

d. Not found: $AG = 0.1$

3. For this text, calculate the root mean square of all $AL$ to compute the gradient lexical accuracy and of all $AG$ to compute the gradient grammatical accuracy.

4. The holistic accuracy score for the text is the sum of the two means.

We are in the process of implementing this algorithm and will evaluate the concurrent validity of this computational measure by comparing it against the results of a human error-level annotation of a subset of our learner corpus (~3700 sentences in 281 texts; two annotators; inter-annotator agreement: Pearson's $\rho = 0.89$ ($df(279)$, $p<0.000$, 95% CI: 0.87 <> 0.91).

4. Conclusions

We have shown previously that the robust measuring of the complexity and fluency of written learner texts can be based on a set of simple analyses and are confident that our algorithm for measuring accuracy levels yields similar results. Measuring proficiency levels online will improve the quality and quantity of feedback and guidance learners can receive in CALL writing tasks.

5. Acknowledgements

This research is part of the project Scaffolding and Individualized Instruction in Computer-Assisted Language Learning funded by the Social Sciences and Humanities Research Council of Canada (Principal Investigator Trude Heift; Co-investigator Mathias Schulze).

6. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Pedagogical evaluation of web-based autonomous language learning

Rafael Seiz-Ortiz  
Universitat Politècnica de València  
Valencia, Spain

Francesca Romero-Forteza  
Universitat Politècnica de València  
Valencia, Spain

Abstract

Most resources available on the World Wide Web for language teaching and learning seem to be developed for use in blended-learning environments or in face-to-face situations. The web, though, could be a feasible environment to deliver language learning in more autonomous scenarios, provided the specific needs of the autonomous language learner, in terms of pedagogical feedback, interaction and support throughout the learning process, are considered. This paper deals with the issue of conducting pedagogical evaluation of web-based resources for the autonomous learning of languages. The objective of the study is to suggest a systematic method for evaluating web-based CALL resources for autonomous language learning from a pedagogical standpoint, and we describe the series of steps that were taken to integrate both theoretical and practical approaches. Firstly, a theoretical model is proposed to account for the web as an appropriate environment for autonomous language learning. Secondly, the theoretical model is used to develop a questionnaire template that incorporates key questions identified by the research literature as being fundamental in autonomous language learning. These questions are related to the theoretical model. Then, the pedagogical model and template are implemented in a small-scale pedagogical evaluation study of web-based language learning resources whose common feature is their suitability for autonomous learning. The languages chosen in this study are English and Catalan. Finally, some conclusions are drawn regarding the appropriateness of the pedagogical evaluation methodology and also about some of the pedagogical features that can be recommended for web-based CALL resources for autonomous language learning.

Keywords: Web-based CALL; pedagogical evaluation; autonomous learning; Catalan; English.

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1. Introduction

Most resources available on the World Wide Web for the teaching and learning of languages seem to have been devised to be used in blended-learning environments or in face-to-face situations, as tools in the teaching/learning process, rather than considering the technology as a tutor (Levy 1997). In order to cope with two major problems of web-based CALL when it comes to its efficient use in autonomous language learning contexts (huge quantity of resources and excessive reliance on teachers or face-to-face environments), pedagogical evaluation of the available resources becomes a matter of prime importance. This paper aims to meet this need and suggests a systematic methodology for evaluating web-based CALL resources for
autonomous language learning from a pedagogical standpoint. Firstly, a theoretical model is proposed to account for the features of the web as an autonomous language learning environment. Secondly, the theoretical model serves as a basis to build up a questionnaire template including key questions dealing with topics and findings identified by the research literature as being fundamental in the autonomous language learning process. Then, the pedagogical evaluation model and template are implemented together in a small-scale pedagogical evaluation study.

A major objective of autonomous language learning is to foster learner’s autonomy so that learners can take full control of their own learning process (Littlemore 2001), and to meet that objective, ICTs and computer technology open up a wealth of possibilities, since they promote both learning autonomy and the learner’s (co)responsibility in the process (Trenchs 2001: 22). Another key issue in autonomous language learning processes is for the learners to know what their lacks and learning needs are, what methodology should be used and which learning resources are the most appropriate ones in order to adapt the process of learning to their own learning style. In this context, ICTs should facilitate autonomous learning through a distribution and delivery of content that makes it possible for the learner to take the adequate decisions (Barberá et al. 2008), as well as through the right level of support and feedback.

2. Methodology for the pedagogical evaluation of web-based autonomous language learning

2.1. Theoretical model

Before starting the pedagogical analysis suggested here, a theoretical model has been proposed to account for web-based autonomous language learning. This model is based on a threefold pedagogical evaluation framework where web-based language learning resources can, for the purposes of autonomous learning, be evaluated as communication resources, as usable resources and as self-learning resources (Romero-Forteza 2012). The model also establishes a difference between three levels of evaluation, since the pedagogical analysis of resources may be focused on theoretical issues (theoretical base), on features that the resources have by design (pedagogical characteristics), or on how the resources are actually used in a real educational context (pedagogical applications) (Seiz 2006).

2.2. Pedagogical evaluation template

The theoretical model was used to establish the parameters to develop a template to evaluate web-based resources for autonomous language learning from a pedagogical standpoint. The template consists of a 150-item questionnaire. Although it is very difficult to set up clear criteria to establish and analyse what is involved in excellent web-based autonomous language learning, due to the wide range of approaches, labels and learning theories (Felix 2002), the template suggested here is based on theoretical and practical issues and parameters resulting from the theoretical model.

2.3. Implementation of the pedagogical evaluation methodology

Once the theoretical model has been suggested and a pedagogical evaluation template based on it has been devised, the latter has been used in a small-scale study to ascertain the feasibility of applying the suggested methodology to the evaluation of actual web-based resources for autonomous language learning. The target languages of the learning resources were Catalan and English. The criteria used to select the corpus were the following: (1) the web-based resources have been developed to be used in a self-teaching (autonomous learning) context; (2) the resources should be complete courses or modules, i.e. with a series of learning objectives thought to attain a clearly defined linguistic level; (3) access and use of the resources should be open and free. A total amount of six web-based resources were selected, three of them for Catalan and three for English. These resources were pedagogically evaluated by means of the template introduced above. The scale and scope of the study were very small and limited, although that was not regarded as a major drawback, since the objective was to assess the feasibility of the pedagogical evaluation methodology.

3. Discussion

The results of the study showed both advantages and disadvantages of the resources. The strong points were the adequate incorporation of technological innovations in multimedia and a widespread implementation of CMC (Computer Mediated Communication) tools, which may strongly foster a high degree of control of the process
by the learner, as well as improve communicative competences in an autonomous way. There were, though, some major deficiencies, since the resources were not flexible enough to cover the learning needs of an autonomous learner. None of the resources were sufficiently intelligent—i.e. applied Intelligent Computer Language Learning, or ICALL—in terms of pedagogical and meaningful feedback, learner-resource interaction and pedagogical support.

4. Conclusions

The suggested theoretical model and pedagogical evaluation template, that is the proposal of an evaluation methodology, proved to be a practical and feasible way of conducting pedagogical evaluation of web-based language resources from the point of view of autonomous language learning. This methodology is based on sound research, addresses the specific features of the autonomous language learning process, and, last but not least, is easy to apply to actual web-based educational resources.

The pedagogical analysis of the six web-based language learning resources showed that none of them could be considered as fully appropriate for use in 100% autonomous (or self-learning) scenarios and educational contexts, since the pedagogical feedback and support they provide is not sufficiently intelligent, meaningful and flexible to allow this type of learning. There is a need of further research to suggest educational design principles to be applied when developing web-based language learning resources that claim to be appropriate for use in autonomous learning contexts. The pedagogical evaluation methodology proposed here can assist to meet that need.

5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Intercontinental Russian-English workshop

Konstantin Shestakov  
Omsk Law Academy  
Omsk, Russia

Lonny Harrison  
University of Texas at Arlington  
Arlington TX, USA

Abstract

This paper discusses a longitudinal study of students and instructors at one Russian and one American university who collaborated in a virtual language workshop. Stressing the importance of learner autonomy, a major goal was to provide a sustainable venue for the development of Intercultural Strategic Competence (ISC). The results of the collaboration are presented and interpreted towards creating a framework for the development of similar CALL innovations.

Students enrolled in separate courses at each institution: a class studying English at Omsk Law Academy in Russia, and a class studying Russian at the University of Texas at Arlington in the United States. Professor-led virtual meetings were held via videoconference to practice spoken Russian and English and to share in cultural experience. In addition, asynchronous meetings between partner pairs were assigned for cross-linguistic and cross-cultural practice. Partners conversed in virtual meeting spaces and shared multimedia technology to work on assigned translations and other active learning tasks.

Evaluation criteria were used to compare the work of an experimental group and two control groups consisting of traditional classroom learners. Results showed variation in the quality of translations produced, depending on factors such as number of prior language-study hours, contact with native speakers, and use of a shared workspace and other collaborative technologies. Further results showed not only that proficiency was greatly enhanced by the synchronous virtual workshop, but also that asynchronous meetings with language partners increased learner autonomy and collaborative ability, as well as boosted social-cultural competencies and learners’ confidence using the target language.

Keywords: Intercontinental collaboration; Online community; Video conferencing; Blogs; Networking; Motivation; Cultural competency; Learner autonomy

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1. Introduction

Research into online language instruction and learning underscores the importance of group bonding, seen as particularly important when communication is the emphasis (Lamy and Hampel, 2007). Moreover, online collaboration provides opportunities to engage in communication with native speakers and affords for negotiation of meaning. This method enables students not only to acquire the target language, but also to perform linguistic tasks that are a natural part of human communication (Belz, 2003). Studies show that online telecollaboration contributes to development of learner autonomy (Kessler & Bikowski, 2010), linguistic competence (Ware & O’Dowd, 2008), intercultural and sociocultural competence (Furstenberg et al., 2001;
Belz, 2004), online literacy skills (Guth & Helm 2011), translation skills (Chen & Ko, 2010), confidence and motivation (Wu et al., 2011), and compensation and communicative strategies (Tavakoli et al., 2011; Yanguas, 2010; Ahari et al., 2012; Lam, 2006).

The present study examines new models of online interaction between language learners and native speakers of their target language. Stressing the importance of learner autonomy, a major goal is to provide a sustainable venue for meaningful communication that is content-based and connected to real-life situations for the development of Intercultural Strategic Competence (ISC). The current project allowed us to do so and to measure ISC effectiveness.

2. Method

An initiative was undertaken to collaborate between two universities—Omsk Law Academy (OLA) in Omsk, Russia, and the University of Texas at Arlington (UTA) in Arlington, TX, USA. Students collaborated in a virtual language workshop, the results of which are presented here towards creating a framework for the development of similar CALL innovations. The novelty of our project is that synchronous group classes were combined with one-to-one and triad meetings in a videoconference setting, along with other asynchronous communication via email and blogs. The project is longitudinal and has been in process for three consecutive semesters.

One hour-long session per week consisted of a professor-led virtual meeting via videoconference between students at OLA and UTA to practice spoken Russian and English and to share in cultural experience. Two other synchronous classes were spent at each school preparing for the virtual meeting. In addition, asynchronous meetings between partner pairs were periodically assigned for cross-linguistic and cross-cultural practice. Partners conversed in virtual meeting spaces and shared multimedia technology to work on assigned translations and other active learning tasks.

Among the tasks assigned for partner collaboration were presentations about one’s hometown and university, translation of a Wikipedia article and video from a popular TV program, and a translation task targeting cultural competency. Effectiveness of the ISC method was measured by comparing an experimental group (EG) to two control groups of traditional classroom learners (CG1 and CG2). The EG consisted of 13 students who had completed 2 semesters of translation studies; CG1 had 7 participants with 6 completed semesters; CG2 had 8 participants with 2 semesters.

To test the ICS hypothesis, a measure was taken after students translated a Wikipedia article from Russian into English. EG students contacted their native-speaker partners and received corrective feedback about their translations. These students also worked collaboratively in Google Translator Toolkit. Students of both CGs translated on their own without contacting native speakers.
Students view and discuss cultural topics during a synchronous online session

3. Discussion

Evaluation criteria of the Union of Translators of Russia were used to compare the work of the EG and CGs. The results showed variation in the quality of translations produced, depending on factors such as number of classroom hours, contact with native speakers, and use of collaborative technologies. Further results showed not only that proficiency was greatly enhanced by the synchronous virtual workshop, but also that asynchronous meetings with language partners increased learner autonomy and collaborative ability, as well as social-cultural competencies and learners’ confidence using the target language.

The following data demonstrate that students from the EG achieved better translation quality than CG2 and comparable quality to CG1. However, the students of the EG had had nearly three times fewer study hours than CG1.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Number of language &amp; translation study hours before the experiment</th>
<th>Total score of translation quality in each group</th>
</tr>
</thead>
<tbody>
<tr>
<td>EG</td>
<td>366</td>
<td>59</td>
</tr>
<tr>
<td>CG 1</td>
<td>1058</td>
<td>55</td>
</tr>
<tr>
<td>CG 2</td>
<td>366</td>
<td>21</td>
</tr>
</tbody>
</table>

Although the translations produced by the EG and CGs contained approximately the same number of errors, higher overall translation quality in the EG suggests that EG students took advantage of their relationships with native-speaker students to contact them and ask for editing help. It can be concluded that their greatest improvement was in learning to use collaboration with native speakers to solve concrete language and translation problems.
At the end of the project, surveys were given to assess student attitudes. Feedback from UTA students showed that the project helped them develop their speaking and listening skills most of all. Furthermore, the data show that the majority of students were satisfied with the outcome of their collaboration.

![Rate on a scale of 1-10 (1 - least likely) how likely are you to take a similar language course in the future.](chart1)

![Rate on a scale of 1 - 10 (10 very likely) how likely are you to recommend this course to others.](chart2)

In another measurement, 70% of OLA students in the EG reported that they felt confident and comfortable talking to an unfamiliar native speaker, while only 10% of the CGs said that they were comfortable. The other 90% of the CGs reported that they felt anxiety and fear.

Challenges encountered and reported by students on both sides of the collaborative project included: difficulty connecting with partners (due to time difference or apathy); technology (connectivity problems, lack of experience using web-based conferencing tools); communication (undeveloped language skills); and homework (time-consuming preparation).

4. Conclusions

The ISC hypothesis aimed to establish whether there is a correlation between students’ use of social and collaboration strategies and the quality of translation output. Our experimental model involved facilitating real-to-life communication on diverse cultural topics. Social networking technologies were used by instructors and
language learners to share knowledge and information on cultural topics. This model of collaborative pedagogy was found to develop linguistic and cultural competency in a faster, more efficient and satisfying manner than traditional classroom methods do.

Helping students establish personal ties with native speakers to achieve their target language goals, we aimed to create an environment where they would feel free and empowered to become autonomous learners. Such an initiative creates a sustainable, longitudinal project environment for content-based target learning.

Our intercontinental virtual language workshop provides a model for similar sustainable collaborations among institutions for the development of CALL innovations over the long term.

5. References


Students’ perspectives on the benefits of using mobile apps for learning languages

Caroline H Steel
The University of Queensland
Brisbane, Australia

Abstract

The objective of this research is to understand the benefits and constraints that language students perceive in their use of mobile applications (apps) for language learning. Theoretically, this study is positioned within a constructivist framework that draws upon the student voice through collaborative enquiry. Two data sources were utilised. The first, a 2011 survey of language students at an Australian university, found that 331 (56%) language students used mobile apps and 134 (23%) ranked mobile apps in their top three most beneficial language learning technologies. The second source was an undergraduate class (2011-2013) who more thoroughly investigated the use of mobile apps for their own language studies. These students revealed initial optimism for the potential use of apps, however, limitations were also realised. Additionally, students identified a number of desirable functions and features that might inform future app development for language learning.

Keywords: MALL; mobile language learning, mobile apps; student voice

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1. Introduction

In their 2008 article, Agnes Kukulska-Hulme and Lesley Shields highlighted the rapid evolution in mobile learning. That evolution has continued with substantial increases in ownership of mobile devices globally (Stockwell, 2012; Traxler, 2011; Telstra, 2011) combined with a rapid expansion in the mobile application (apps) market (Godwin-Jones, 2011). For language learners equipped with their personal mobile devices, mobile applications offer new potential for learning that is untethered by place or time. Mobile learning offers a way to utilise their “everyday life-worlds as learning spaces” (Pachler, Bahmair & Cook, 2010, p.6). Furthermore, these developments have the capacity to change, or at least influence, students’ informal language learning practices. Thus it is important to monitor these changes and to understand students’ perspectives on their use of mobile applications for language learning. As Kukulska-Hulme suggests, “by reviewing individual learner experiences in learner-determined contexts, researchers and the language teaching community can work together to build up a picture of emergent practices” (2012, p.3). Involving the student voice is important because it acknowledges that students also want to understand and influence their own mobile language learning practices toward more productive outcomes.
The purpose of this paper is to provide insights into language students’ perspectives on the benefits of using mobile applications for learning languages; as well as some of the constraints. The motivation to gain these insights was derived from a survey of 587 language students at an Australian university. Via the survey, 331 (56%) of respondents reported using mobile apps to support their language learning. Additionally, 134 of these language students (23%) ranked mobile apps in the top three technologies they perceived as beneficial to their language learning. Qualitative comments associated with the rankings gave some sense of why students perceived their mobile apps as advantageous. However, the researcher invited a class of undergraduate language students, as ‘co-enquirers’ to evaluate language apps more thoroughly through the lenses of learning, language acquisition and affordance theories. These undergraduate students became enthusiastic about the potential benefits of mobile apps however, as they investigated them more thoroughly they were more discerning about the ways mobile apps were designed for language learning. Certain pedagogical and practical features were lacking.

2. Method

This research is conducted within a constructivist theoretical framework that acknowledges learning as an active and creative process that seeks to connect new knowledge and skills with current and past knowledge (Bruner, 1996). It also invites the engagement of both learners and teachers to find out what students know through shared conversation or collaborative enquiry. As such, these projects were designed to foreground the student voice with the aim of better understanding students’ perspectives on the potential of mobile apps to support their language learning.

2.1. Survey

Language students at one Australian university were invited to participate in an online survey to identify the technologies they used to support their language learning inside and outside of class. Of the 587 respondents (28% of invitees), 331 (56%) of students reported using mobile apps to help learn languages and 134 (23%) students ranked mobile applications in their top three most beneficial technologies for language study out-of-class. Students’ perceptions of the benefits of mobile apps were reported qualitatively and these were analysed inductively.

2.2. Student inquiry

In 2011, 2012 and 2013, a total of 114 undergraduate language students were invited to choose a technology to evaluate that had potential to help their language learning and report their findings via radio-style podcasts. Each year the number of students selecting mobile apps increased with a total of 63 students (nearly 60%) evaluating apps over the three years. As co-researchers, students were equipped with several theoretical lenses to help their investigation. These included second language acquisition, learning and affordance theories. Student findings on mobile apps were aggregated and analysed for common themes that represented student perspectives on the benefits and constraints of mobile apps for language learning.

3. Discussion and conclusions

Qualitative survey comments from students who ranked mobile apps in their top three most beneficial out-of-class technologies revealed benefits often associated with being able to learn on-the-go. Students enjoyed being able to personalise their language learning and achieve learning tasks quickly, easily, spontaneously and habitually. The portability of devices loaded with apps meant that language learning was less compartmentalised, and less time and location dependent. ‘I always have my phone with me so my phone apps for my language learning are with me as well’. This concept of portability extended to workplaces and enabled students to revise and review their in-class learning. ‘It is accessible to me during brief breaks in my work schedule and allows me to revise points quickly’. Overall, students found mobile apps ‘easy-to-use and understand’ and ‘accessible anywhere anytime’. They highlighted that apps were generally free or low cost and ‘are often many things in one: dictionary, text-book type exercises, flash cards, audio, writing practice devices etc.’

In the student-led inquiry, undergraduate students could select any technology to evaluate for their podcasts. The appeal of mobile apps, as the focus of this evaluation, increased significantly over the three years (see Table 1). In 2011, 38% of students selected mobile apps and this grew to 51% in 2012 and to 72.5% in 2013. Such
increases may be indicative of more general trends however such a claim would need to be substantiated through further research.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total student numbers</th>
<th>Evaluated mobile apps % (no.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>29</td>
<td>38% (11)</td>
</tr>
<tr>
<td>2012</td>
<td>45</td>
<td>51% (23)</td>
</tr>
<tr>
<td>2013</td>
<td>40</td>
<td>72.5% (29)</td>
</tr>
</tbody>
</table>

Table 1: Students choosing to evaluate mobile apps in undergraduate class

Student podcasts demonstrated students were enthusiastic about the potential benefits of mobile apps for learning languages. The portability and convenience of the apps allowed for more contingent learning, the ability to use ‘dead time’ more productively and spontaneously across time and space. Some apps included functions that were motivating, such as the gamification of learning, while others enabled students to try alternative learning strategies to those they reported normally using. Furthermore, students appreciated certain design features, such as the capacity for multimodal and interactive learning, the contextualisation of learning (through examples, visuals etc.), and the ability to self-regulate learning and receive feedback.

However, on closer evaluation, some students found that app development was still immature with limited pedagogical variance. Additionally, it was challenging to find apps that met students’ specific needs. For example, apps that suited specific language levels, goals or in-class content. The ability to personalise content to integrate with in-class work, goals and levels was a desirable design feature, mostly peculiar to flashcard apps. The capacity to use apps across multiple devices was also desirable. The overall quality and trustworthiness of the apps was important to students. When it came to buying apps, students were extremely price sensitive.

So, while mobile apps do have benefits for language learners, their limitations indicate that their design and development are still immature. Students hope that future app development might see more of the features that they find most desirable and beneficial to their learning. Finally, it is important to note that these undergraduate learners readily engaged with this research project because they wanted to understand how they could influence their own language progression using the technologies that were personally available to them. They expressed a hope for more interactive conversations with their language teachers and peers about how their personal devices and mobile apps can help them use their out-of-class time more productively. Herein lies a great opportunity to involve our students in influencing the future of language learning. After all, as Mitra insightfully wrote, “to improve student achievement, it makes sense to go straight to the source—students” (2008, p. 242).

4. Acknowledgements

I would like to acknowledge the contribution of my undergraduate students who consented to participating in this study and contributing their own research findings. I thank them for their insights and admire their enthusiasm for learning more about themselves as language learners.

5. References


How has language students’ use of technologies changed: 2006–2011?

Caroline H Steel
The University of Queensland
Brisbane Australia

Mike Levy
The University of Queensland
Brisbane Australia

Abstract

This paper compares language learners’ technologies-in-use at an Australian university in 2011 with similar studies conducted five years earlier in Canada and the United Kingdom. Similarities and changes in technology use are discussed in the context of technological evolution, adoption and diffusion. The paper also reports on the technologies that these 2011 students’ suggested they would like to see more of in class as well as their overall preferences for different learning modes (e.g., face-to-face and online).

The 2011 data was collected via a large-scale survey from 587 language students at one Australian university as part of a project called, “The beliefs and experiences of language students in their early years of transition to university study”. The study used a mixed methods research approach to seek student perspectives on many aspects of their language learning experience, including those supported by technology use in some form.

Our comparison revealed some distinct and some subtler changes across the technology landscape between 2006 and 2011. A mixed response from students about technology use inside of class highlighted the diversity of student perspectives on technologies as well as the high value some students attribute to the role of the teacher and to face-to-face interaction. However, consensus was clear on their preferred delivery mode for language education. In combination, these results convey some strong messages for Australian universities offering language study that should be heeded given current priorities and directions.

Keywords: CALL tools; online dictionaries; VLE; student preferences

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1. Introduction

This paper reports on the results of a comparison between reported technologies-in-use in language learning in a tertiary setting in 2006 and in 2011. Two studies (Conole, 2008; Peters et al., 2008) were employed to provide the point of reference for 2006. A new study examining patterns of technology use by language learners at an Australian university was used for 2011. This comparison was of particular interest since the technologies used by language students appeared to have changed in significant ways over this five-year period. Given that new technologies typically follow a ‘Hype Cycle’ (Fenn, & Raskino, 2008; Gartner, Inc., 2013), and a lag time for
adoption and diffusion (Rogers, 2003), it is perhaps unsurprising that technologies founded or coined circa 2004-2005 such as Facebook, podcasts, Skype and YouTube were scarcely mentioned in the 2006 studies. Further, since 2008, mobile applications or ‘apps’ have proliferated exponentially, especially with the advent of Apple’s Software Development Kit (SDK) (Godwin-Jones, 2011). Simultaneously, smart phones, mobile devices and internet data packs have become more affordable to contemporary Australian students. Thus the major aim of this study was to chart the evolution of change in language students’ use over this very significant five-year period of change. A secondary aim, in relation to the first, was to canvass student opinions about the kinds of technologies students would now like to see more of in their language classes and the kinds of language education delivery modes that they would prefer.

2. Method

Data was collected via a large-scale survey of at one Australian university in 2011 called, “The beliefs and experiences of language students in their early years of transition to university study”. The study used a mixed methods research approach to seek student perspectives on a wide range of dimensions of their learning experiences.

2.1. Sample

Representing a response rate of 28%, 587 valid responses were received from a possible pool of 2,114 foreign language students. An invitation was distributed via email with a unique link to the online survey. Respondents studied Chinese, French, German, Indonesian, Italian, Japanese, Korean, Russian, Spanish and Portuguese with 76% in the 17–21 year old age range.

2.2. Instrument and analysis

The data used for this paper focuses on just four questions from the survey that specifically relate to students’ reported use of technologies and their future preferences for in-class use and study mode more generally. The first question asked students to (a) indicate which technologies they currently used to support their university language studies and (b) indicate whether they used them in-class, out-of-class or both. The second question asked students to rank the three technologies they considered most beneficial to their language learning. The third question asked students to write free text comments on “What technologies you would like to see more of in your language classes and why?” And finally, the fourth question asked students to indicate their agreement (via a scale) as to their desirability for 7 language education delivery options, from concentrated immersion courses and face-to-face delivery with VLE use (as the only technology option) to blended learning and wholly online courses. Quantitative data was tabulated and free text comments were coded thematically to identify common themes.

3. Discussion

Subtle and distinctive changes were noted over the five to six years between studies. Particularly, some technologies were found to have now been normalised (Bax, 2003), others have transformed or converged, and others have disappeared. The technologies reportedly used by over 50% of the Australian students were more discipline-focused than in the 2006 studies. They encompassed technologies that could be considered as a basic “toolkit” for learning languages. At the same time students also used newer technologies—for example, YouTube, social networking sites and mobile apps—to enhance discrete language skills or areas (e.g., vocabulary, pronunciation).

Another difference was the relatively low usage of institutionally provisioned technologies for language learning purposes in 2011 compared with 2006. This perhaps reflects the fact that more students now own their own technology devices and can select technologies they perceive as beneficial over those that are institutionally mandated.

In terms of students’ suggestions for technologies they would like to see more of in the classroom, a mixed response was noted with some student opposing the idea of more technology; there was also little consensus on the technologies that students did desire. For example, 16% of students voiced concerns that technology was no replacement for good teaching and contact hours, while 6% conveyed that present levels of technology use were perfectly adequate. A further 13% either made no suggestions at all or indicated that they were unsure of what else was possible. However, just over 25% of students asked for more video-related technologies in class and
7.5% wanted more technology-supported games. Students were more consistent when asked about their preferred mode of language education delivery. An impressive 519 students ranked the ‘completely online’ option as ‘undesirable’ (16%) or ‘highly undesirable’ (75.5%).

4. Conclusions

The high value language students put on the role of the teacher and of contact time more generally was evident. Students are not necessarily convinced of the need for more technologies inside class unless they can see immediate benefits, such as motivational ones, or those that provide wider access to authentic language such as different accents, characters etc. Certainly, where possible, and in the face of institutional agendas for putting low-enrolment languages online, students preferred higher levels of face-to-face contact time or, even better, immersive language environments.

Overall though, the range of technologies now available to language students has changed over the five-year period between the studies. New technologies are more varied, more powerful and more affordable than they were previously. Certainly, students are using more of their own personal technologies out-of-class and moving away from institutionally provisioned ones. This change signals the need to re-think how universities can provide the infrastructure to support students’ personal technologies and preferences. With the possibilities inherent in newer technologies, there are now more effective opportunities to tailor technologies to disciplinary needs and requirements. The personalized learning environment is complementary to this trend, though it is not necessarily mirrored in current research directions in CALL. To further extend the current research work, more CALL studies need to focus on how language students are using their personal devices to help their language studies out-of-class. Related to this is the necessity to monitor the extent to which language students have the digital literacies and autonomous learning skills to evaluate the affordances and constraints of new and emerging technologies, particularly for out-of-class language learning.

5. References


Abstract

Over the past several years, the majority of universities in Japan have aimed to bring up their students to be globally aware, focusing heavily on English language education to achieve this goal. Much of this language education, however, occurs quite independently from enhancing cultural awareness, despite the strong correlation between language acquisition and developing cultural awareness. Unlike in many multicultural countries where there is cultural diversity in the classroom, Japan’s comparably homogeneous cultural environment limits the opportunities students have to share their knowledge and experiences about other cultures in class. To counter such problems, email exchanges between Japanese students and students in different countries have been used to promote cultural understanding. In non-foreign language classes, however, it is difficult to find appropriate email “keypal”, largely because of language barriers, as there is not a co-dependence in the interactions as might be seen in tandem language learning email exchanges. The purpose of the current study is to examine whether web-based exploration and interaction increases students’ understanding of other cultures. Students in an intercultural communication class in a Japanese university used WebQuests to understand various different cultural contexts. Quantitative data were collected through pre- and post-tests and an adapted version of the GENE (Generalized Ethnocentrism) scale questionnaires during the course. The analyses of students’ reflection on the online forums and essays written on completion of the WebQuests were used as the qualitative data. The results of the study showed a positive improvement in students’ intercultural competence both qualitatively and quantitatively.

Keywords: intercultural competence; cultural context acquisition; inquiry-based activity; WebQuests

1. Introduction

Since the term “intercultural communication” was introduced by Edward T. Hall in 1959, issues of intercultural communication have been dealt with in virtually any area related to human interaction. Recent researchers have devoted systematic attention to developing “cultural fluency,” “cultural literacy” or “intercultural competence,” but what does intercultural communication competence refer to? Kim and Gudykunst (1988) interpreted intercultural competence grounded in the “adaptability” that is the ability to adapt to a new culture. According to Kim (1991), there are three dimensions related to the concept of cultural adaptability: (1) the cognitive dimension, (2) the affective dimension, and (3) the behavioral dimension. Stier (2003) also suggested two
necessary competencies in intercultural competence: content competencies, referring to “knowing that” – the aspect of not only other cultures but also one’s own culture, and processual competences related to “knowing how” within an interactional cultural context. Thus, in order to develop intercultural competence, we need to be aware and understand various aspects of both our culture and other cultures. Related to this process, we need to have the cognitive and emotional motivation to cope with encountering unfamiliar settings as well as some appropriate verbal and non-verbal skills to interact with people from different cultural backgrounds. Accordingly, it is essential to reflect on this process in order to develop intercultural competence.

The methods through which culture is acquired have also changed from a traditional information acquisition approach to a process-oriented constructivist approach. That is, there has been a movement from approaches where learners are largely told about the target culture by the teacher to students’ active participation in construction of understanding about the target culture along with reflecting on their own culture. Goodyear (2005) argues that the use of technology as a means of acquiring culture holds particular promise for the creation of learning settings that can interest and motivate learners. In the current study, in order to promote students’ active participation in learning culture and to help students’ understanding and reflection on various cultural contexts—including their own—an inquiry-based activity using WebQuests has been adopted. Through WebQuests, instructors are able to select information suited to their students’ cognitive capacities and linguistic abilities, and learners can use various resources to organize information and apply their knowledge to real-life situations. WebQuests can help learners, particularly those in homogeneous cultural learning environments, to gain broad cultural knowledge that goes beyond the textbook or the teacher. Accordingly, the aim of this study is to examine whether using a systematic inquiry-based approach incorporating WebQuests helps students in a homogeneous cultural environment to understand various cultural contexts and improve their general intercultural competence.

2. Method

2.1. Participants

This pilot study was carried out in an undergraduate elective communication studies course at Hosei University in Tokyo, Japan. The aims of the course were to enable students to be aware of and respect cultural diversity through exploring various cultural contexts and theories, and eventually to apply the knowledge learned in class into their intercultural experiences. There were 92 students enrolled in the course, of which 24 students participated in the study voluntarily. The remaining 68 students were used as baseline comparative data.

2.2. Procedure

To foster students’ intercultural communication competence effectively using a WebQuest task, the study was designed in five stages using concurrent quantitative and qualitative data collection. The quantitative data were collected through pre- and post-tests using an adapted version of the GENE (Generalized Ethnocentrism) scale questionnaires. One of the course objectives was to develop skills in intercultural competence, of which a key component is motivation to be aware of other cultures, and understand and assimilate into other cultures. A factor that interferes with such motivation is ethnocentrism (Samovar, Porter, & McDaniel, 2007), and measuring students’ ethnocentrism can reveal their degree of openness and flexibility toward other cultures. The analyses of students’ reflections logs of learners’ interaction on the online forums and an essay written on completion of the WebQuests were used as the qualitative data.

3. Results and discussion

The pre- and post-test quantitative data were analyzed using SPSS Version 21.0. Overall reliability, as determined by Cronbach's alpha, was .92. The data indicated a significant difference in scores and that the mean level of ethnocentrism in students decreased from before starting the course to after completing the course. Students who participated in the WebQuest tasks exhibited a more obvious reduction in their ethnocentrism, with the drop in the average ethnocentrism scores of both of groups (non-participants and participants) significant at $F(1,131) = 12.456, p < .01$ and $F(1,46) = 7.1395, p < .01$ respectively. This statistically significant reduction in ethnocentrism in students suggested the WebQuests contributed to learners developing more open and flexible attitudes toward other cultures.

Qualitative data collected from students’ reflection in the online forums, discussions after completing the WebQuests tasks and in their written assignment revealed that overall students showed an increasingly open and
receptive attitude toward other cultures. At the same time, many appeared to analyze the reasons why Japanese culture caused misunderstanding to others. In reflections collected after the WebQuests, most students indicated the information obtained through the WebQuests also helped them to better understand the content of the lectures.

4. Conclusions

This study suggested that WebQuest activities help students to better understand the content of their classes through actively finding information from various resources—not textbooks, but rather real voices from other people on the internet—thus motivating students in their learning process. In addition, as the result of the GENE scale showed, WebQuests contributed to achieving the main objective of studying intercultural communication, positively changing learners’ perceptions and attitudes about their culture and other cultures. Moreover, through the results of this study, it was possible to see the potential of using WebQuest activities in a non-English language learning course, suggesting that if teachers are able to design WebQuest activities suited to their students’ learning and linguistic capacities, they can be used to fit effectively into a range of class types, and overcome linguistic barriers that might hinder their potential outcomes.

5. References


Sustaining out-of-class mobile learning through a mobile phone-based “push” mechanism

Glenn Stockwell
Waseda University
Tokyo, Japan

Abstract

Mobile technologies have the potential to empower learners to work outside of the classroom with a freedom that is difficult to achieve with more traditional technologies such as desktop computers. Mobile language learning has attracted a good deal of attention in the language learning literature in recent years, but research into how learners use mobile technologies out of class is relatively limited. The current study investigates the effect of a “push” mechanism on mobile activity engagement, where learners could choose whether to have daily email messages sent to their mobile phones providing information about vocabulary items covered during class, in addition to “pull” web-based vocabulary activities. Data included server logs of how fifty Japanese learners of English complete activities on both mobile and PC platforms, specifically examining whether the “push” mechanism had an effect on the way they engaged in the activities. Student questionnaires and follow-up interviews were employed to examine learner uses of the emails beyond what could be established through the server log data. The results showed that more than half of the learners chose to have the emails sent to them, but did not access the activities within several hours of receiving the emails. The study also suggested that there were differences in the way in which learners engaged in mobile activities compared to activities on the PC platform. Suggestions about the potential role of the “push” mechanism are also discussed.

Keywords: mobile learning; vocabulary; sustainability

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1. Introduction

That mobile devices have the potential to provide new learning opportunities to learners compared with other electronic devices is now quite well established (Kukulksa-Hulme, 2005). We know that learning that takes place outside of the classroom is very likely to be “a highly fragmented experience liable to be fraught with distractions” (Kenning, 2008, p. 194), and there is still much conjecture regarding actual use.

A concept that has received attention as a feature of mobile learning is the potential for both “push” and “pull” mechanisms, which means that not only is it possible to “pull” resources from the device at a time that is convenient, but it is also possible to “push” information to learners without them needing to seek it out for themselves (e.g., Mellow, 2005; Motiwalla, 2007). Each of these mechanisms causes the learner to engage with
the mobile device in rather different ways, and as such has the potential to alter the learning activities they use, in terms of not only the content, but also the time and place the learning occurs. The nature of learning outside the classroom, however, makes it difficult to determine the ways in which learners engage in the activities, and indeed what the differences are between push and pull mechanisms with regard to the frequency and length of engagement with the mobile device.

The purpose of the current study was to determine when and where learners accessed their mobile phones to shed some light on the factors that lead to the decision to use their mobile device as a tool for completing learning activities as opposed to using a desktop PC. Using an intelligent vocabulary learning system, learner activity was tracked, specifically attempting to determine the amount of time taken to complete activities on each platform, the scores achieved, where learners were when they completed activities on each platform, and the effect of a push mechanism on learner usage. The methodology adopted for the study is described in the following section.

2. Method

2.1. Participants

The participants in the study were 50 pre-intermediate learners enrolled in two classes in a compulsory first-year English-language subject. The primary focus of the subject was the development of listening skills and vocabulary, and authentic videos based on a range of human-interest topics were used in the class. Online vocabulary activities were specifically designed to assist them in doing weekly quizzes based on the videos.

2.2. Procedure

The system used was largely the same as that of earlier studies (see Stockwell, 2008, 2010). The learners were free to choose between using a PC (either at home or in a university self-access computer room) and their mobile phone. While the activities within themselves acted as a pull mechanism, where learners needed to access them from their mobile phones or their PCs of their own volition, the system also included an email reminder function, which acted as a push mechanism. Learner behaviour was tracked through server logs of the learners. Data collected included the times learners logged on and off the system, whether they used their mobile phone or a PC to undertake the activities, where they were when they completed the activities, and the amount of time taken to complete individual questions. Surveys and post-treatment interviews provided further insights into learner behaviour.

3. Results and discussion

The number of learners who opted to use the mobile phone was very low, with over 70% of the learners not using their mobile phones at all to complete the activities, agreeing with previous studies. Only a small number of learners used the email push notification function in early in the semester, but this increased gradually until Week 6, from which time it stabilised around 57%. One of the most surprising results was that there were no instances of learners going back to the use the vocabulary activities within a six-hour period after receiving the email notification from the server.

The times of usage throughout the day across the semester were analysed in order to investigate what times learners accessed the vocabulary activities from their mobile phones or PCs, and to determine whether or not the push notification had an effect on learners’ mobile phone usage. The server logs revealed that there was a large amount of access to the vocabulary activities after midnight, with 28.9% of PC usage and 25.4% of mobile usage occurring between 12am and 4am. While PC usage dropped off after this time, mobile phone usage remained relatively high between 4am and 6am, and after a slight reduction from 8am and 10am, rose very sharply to 30.5% between 10am and 12pm. One major difference with PC usage was that PC usage started to increase from around 12pm through to 6pm, whereas mobile usage dropped off extremely sharply after 12pm, with no usage at all from 4pm and 10pm.

The figures showed that only 15.4% of mobile activity took place while learners were in transit, and that they were more likely to complete the activities at home (43.9%). Use of the system at university was also markedly higher than that of while in transit, suggesting that learners sought a more stable environment in which to complete the activities. PC usage was balanced mainly between home and university, with the majority of
learners using PCs at home to undertake the activities. This was followed fairly closely by university, with a small amount of activity taking place in restaurants and/or cafés.

4. Conclusions

The study indicated that the push notifications did not directly link to immediate engagement in activities, but rather that learners undertook these activities at a range of times, predominantly centred around home and university. Furthermore, learners tended to plan their learning activities on PCs more than they did on mobile phones, preferring to prepare for class quizzes in blocks as opposed to the more sporadic type of access that was seen on mobile phones. This suggests that learners make calculated decisions about which platform to use depending on their particular learning needs.

5. References


Flipped classrooms and CALL sustainability: A rationale for the development of flipped classrooms for sustainable CALL

Daniel F. Stuntz
Josai International University
Kamogawa, Japan

Abstract

The Flipped Classroom (FC) has garnered much interest around the world as more diverse teachers have begun using this approach in their courses. The FC is a classroom where the lecture and homework elements are reversed. The lectures become videos that students can view online before the next class. Class time then is devoted to more active learning, interactive discussions and hands-on activities that encourage students to apply and experiment with the knowledge they have gained from the videos and previous classes. The use of the Internet and mobile communication devices such as smartphones and tablets makes the FC and CALL distinctly interconnected. This paper presentation examines the meaning of this relationship and the potential rationale for the development of FCs for sustainable CALL.

Valuable lessons about sustainable FC strategies and techniques and their applications within CALL environments can be drawn from reflection on issues and research on flipped classrooms and CALL. Those insights have informed the design and implementation of a FC pedagogy and syllabus developed for a Japanese EFL course where students use online video and audio materials to assist in practicing for in-class language performance assessment, expanded role-playing and reflective discussion and writing using L2. The efficacy of a textbook with a CD is compared with the use of a more visual L2 presentation (video) to advance our understanding why certain FC approaches for a language classroom can potentially provide a sustainable, more personally engaging way for students (and teachers) to learn and use time more effectively. The choice of authentic content, online content creation and collaborative apps/services will be a focus as well as the effect FC approaches have on the roles and responsibilities of the teacher and student and the use of technologies are when employed in FC adapted CALL courses.

Keywords: Flipped Classroom; CALL Sustainability; role of technologies; active learning; in-class and out-of-class time management; learning in the cloud; motivation; materials development; EFL; Japan

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1. Introduction

The rising world-wide acceptance of the Flipped Classroom approach has produced in just a few years a significant surge in research, publications and materials investigating its effectiveness in learning through a wide
The data for this study comes from two student surveys also explained in Stuntz (2012) conducted at Josai International University’s Faculty of Tourism, Department of Wellness Tourism. At the beginning of the spring semester in April 2012, first, second and third year students (n = 116) enrolled in the department were given an educational technology use survey to understand technology use behaviour about students. The survey consisted of 20 questions with subsets of opened-ended, multiple choice and closed-ended questions based on the Likert scale. Questions at the end of the survey covered perceptions and preferences of technology used currently in their classrooms and in future classes.

The second survey was given to 15 first-year students enrolled in my 2012 fall semester English for Tourism I course, which used elements of CALL and the flipped classroom approach. Throughout the semester students learned introductory tourism and travel English, and were asked to view some of the content online in the form of videos, shared Google documents and through email. No pressure was placed on how they did this, either by computer or mobile device. An end-of-semester survey, created in Google Forms, helped gauge students’ change in confidence in using the various technologies and their perceptions and attitudes of the course using a paper-based textbook versus the online content. To what extent did students prefer using a computer or mobile phone to complete tasks? How much did their confidence and literacy in technology increase, if at all?

3. Results and discussion

The data from the large educational technology use survey unexpectedly showed that female students had on average 2.6 years more experience than male students in using computers prior to entering the university. This may be why females tended to be more confident than male students year over year where the rate of increase in confidence nearly doubles every year (1Y = 31%, 2Y = 66%, 3Y = 85%). Male confidence on the other hand rose from 20% to 46% between the first and second years and dropped to 27% in the third year. The problem with this analysis, however, is that it compares students in different years separately and not individual change in confidence over time. For the 24 tasks done on a computer (desktop or laptop), approximately 58% (n = 44) of the males and 48% (n = 19) of the female students did not do the tasks regularly, if at all. Across the three years, the most common computer tasks were those most frequently done on phones, such as using the Internet, checking email, viewing videos on YouTube, and searching while doing homework in Word or Excel was done on the computer. Accordingly, most students who had laptops rarely brought them to school, relying rather on their phones or campus lab computers to complete most tasks for class outside of class. Finally, it is significant to note that in spite of Japan’s technologically advanced society, around a third of the students out of the 116 who took the survey were not as confident or as ‘digitally’ native or savvy with the technology available to them as Prensky (2001) and others have claimed this ‘net generation’ to be.

Data from the second survey suggests task-for-task, students (n = 15) did only marginally better on the same tasks over the semester using a computer than on their smartphones or tablet devices. However, students
claimed to be better at searching for websites, information and videos on their phones than on the computer. Most students, (n = 13) who had their own laptops and despite having a DVD/CD player built in, said they did not use the CD that came with the course textbook because they claimed they didn’t have a CD player. Significantly, 10 of the 15 students stated they could apply computer and language skills learned in the course to other English and non-English language courses. While around two-thirds of the students (n = 9) felt unchanged with regard to becoming more interested in using computers to do homework, 13 said using computers and mobile phones to learn English was somewhat to very useful, and 12 thought the computer skills learned were relevant to their future careers.

4. Conclusions

The two surveys suggest that while many students are not as confident with technology initially, the integration of specific technology and media with tasks involving Gmail and Google Docs to mediate learning and production of tourism and travel-related English did improve a majority of the students’ digital literacy and English languages skills in writing emails, creating documents and sharing them with both their peers and myself. The use of technology like Gmail, Google Docs and using the Internet interspersed throughout the semester rose what Kennedy & Levy (2009) refer to as expectations/awareness of the content gradually reducing anxiety in using a computer in another language. Flipping the classroom, as Bergmann and Sams (2012) have shown, “takes the principles of mastery learning and marries them with modern technology to make a sustainable, reproducible and manageable environment for learning” that, with an emerging ‘net generation,’ “speaks the language of today’s students.” Considering the challenge of CALL sustainability in a world of a growing generation of connected students, as well as those who are just beginning to see what can be done with emerging technologies, we recognize that the blended nature of the flipped classroom model actually promotes deeper communicative relationships, curiosity and mastery of the content and higher student achievement, making it a promising framework for flipped CALL courses to flourish and grow. More discourse and qualitative research is necessary to examine a truly flipped CALL course and the factors that make it an effective way to enhance learning, not only of the content but also in learning how to learn that can then be applied beyond the classroom.

5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

The OER movement in Korea: A national digital textbook development and an institutional learning archive system implementation

Kiwan Sung
Kyung Hee University
Yongin, Korea

Abstract

Ever since MIT OpenCourseWare (OCW) shared their course contents with the public, many countries and institutes with technological capacities have developed their own courseware to provide open access to both domestic and foreign students in general. Accordingly, utilizing their advanced high-tech information communications technology, the Korean government and higher educational institutes have made similar and yet somewhat distinctive efforts to allow open access to various instructional contents. First, there have been concerted efforts to develop digital textbooks for elementary and secondary learners of English as a way to provide equal access to learning materials and a more advanced learning management support systems. Second, at the university level, there is the movement to develop institutional archive systems by each university, to join the nationwide open educational resources movement. This presentation introduces these two efforts in order.

Keywords: open courseware; digital textbook; learning archive; portfolio; open educational resources

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1. SMART education and digital textbook development

SMART education builds on concepts of Self-directed, Motivated, Adaptive, Resource-enriched, & Technology-embedded teaching and learning (MEST, 2011). It is in line with the policy of providing “learner-friendly future digital textbooks which include creative and practical knowledge” (MEST, 2010; Kim 2012). Such effort is made by benchmarking other countries’ efforts, such as the Smart classroom project (Australia), the national educational technology plan 2010 (U.S.), InnoSchool (Finland), Future School Promotion Project (Japan), and FutureSchools@Singapore (Jung, Kye, & Kim, 2012). Another goal of SMART education is to help lessen ‘digital divide’ and provide equal access to education to about 610,000 learners from poor families, multicultural families, refugees from the North Korea, and other ‘at-risk’ students (KEDI, 2011).

1.1 Target students and subjects
The digital textbooks will be used for third graders and for up to sophomores in high schools, in subjects such as social studies, science, and English in 2014, and Korean, math, music, arts, and foreign languages in 2015.

1.2 Implementation plan

1.2.1 Standards for digital textbook development (2012-2013)

The government and the Korea Institute of Curriculum and Evaluation researched and announced standards for technology components and contents in order to help developers include diverse teaching materials according to students’ needs by overcoming the limitations of content and activity provision and updating knowledge and information in printed textbooks (MEST, 2011; Figure 1)

![Figure 1: Digital Textbook Developmental Components (MEST, 2011)](image)

1.2.2 SMART learning model development and application in experimental schools (2012-13)

The ministry of education (MOE) and local educational offices are developing a learning model to utilize digital textbooks more effectively in the experimental schools to selected in 2013. They also plan to link this new model to cyber home schooling programs and other currently existing learning models.

1.2.3 Current status and issues

Currently, digital textbooks for elementary and secondary schools are being developed by textbook companies, and the National Textbook Evaluation Committees will select the books based on the standards and evaluations criteria already announced. However, there is a great need to understand how to effectively manage educational resources with copyright. For example, there is a plan to set up the Collective Management center to resolve problems with using copyrighted materials. In the meantime, there is no concrete plan on how to ensure open access to educational contents in digital textbooks developed and, especially, how digital content will be managed and used by local schools, educational offices, and along with printed textbooks, test items developed, e-learning contents, etc. Also sketchy is the government’s plan to initiate educational content donation and sharing in collaboration with the Korea OpenCourseWare (KOCW) or Edunet, or the Educational Broadcasting System (EBS), the Cyber home schooling system, IPTV, etc (MEST, 2011).
2. KHU OCW: KLAS & Portfolio System

2.1. Goals and needs

Following MIT’s OpenCourseWare movement (Potts, 2005), the Kyung Hee University OpenCourseWare (KHU OCW) combines the Kyung Hee Learning Archive System (KLAS, http://klas.khu.ac.kr), which is similar to a learning management system with the archive, with the portfolio system. It was developed to (1) enhance qualities of teaching through open classes, (2) ensure learners’ responsibility for learning outcomes, and (3) recycle knowledge and resources on campus and off campus.

2.2. Brief history of the KHU Portfolio projects

In 2009, the KHU Center for Teaching and Learning developed and implemented the Portfolio System as part of national contents archive and open courseware movement (Ahn & Park, 2009). Then, in 2010, the University’s open educational resources movement (KHU OER, http://ocw.khu.ac.kr) was initiated to expand open access to all by upgrading course qualities and contents (125 instructor portfolios & 405 student portfolios offered). In 2011, 10 English-mediated classes were developed and included while cultivating the communication between instructors and learners through joint course development (174 instructor portfolios & 423 student portfolios offered). Last year, a needs-based & English mediated instructor-tutor-learner (I-T-L) Portfolio system was implemented with the national grant. Thus, both content and English tutors were provided for courses such as Chinese politics and economy, Animation and contemporary culture, History of modern arts, Seminar on customer’s relations, Practical English, Basics of computer graphics, Developmental biology, Physical electrons, ECG & pathophysiology, and Designing radiation measuring instruments. Overall, there were 46 instructor portfolios and 825 student portfolios in 2012, and this I-T-L Portfolio system continues in 2013 (Figure 2). Lastly, the KHU OCW shares open access to learners to all over the world (no login necessary; about 500 courses available as of May, 2013). It is also linked to the KOCW (www.kocw.net), which offers access to domestic/foreign courses (5,162 domestic and 356 foreign courses) available at Korean universities and the Korea Education and Research Information Service (KERIS; http://english.keris.or.kr/)

Figure 2: Linkage of KHU KLAS, OCR, and KOCW
3. KHU OCW: Outcomes and implications

Based on the survey (10 Likert-type and one open-ended items) of 385 students, nine faculty and eight tutors who participated in English-mediated I-T-S, the KLAS and Portfolio appeared to have cultivated a culture of communication that closely connected the instructor with learners (KHU CTL, 2012). This result is similar to the report from other universities (Kim & Kim, 2012). This linkage allowed open access to learners regardless of time and space, which enhanced their interests in learning. The students also had more options to choose courses by reviewing the previews of the courses (e.g., video instruction of the course, syllabus, weekly contents and activities). The KHU OER movement, by linking the KHU KLAS to the Portfolio System and joining the KOCW, first of all, can significantly enhance curricular and instructional qualities while supporting both instructors and learners individually and as a community. Learners can also (1) set their own objectives and plan their schedules through the learning portfolio, (2) manage their time effectively, (3) prepare for the class through reviews and previews, (4) develop skills and strategies for tests or other forms of evaluation, and (5) develop meta-cognitive learning strategies in the end. Second, the instructors said they reflected more on how to improve the quality of their courses and received better course evaluations from the learners. Therefore, the KHU KLAS-Portfolio System can provide valuable support for the instructors to develop or sequence lesson contents and related activities in the system. Moreover, they will make more effort to improve their classes proactively, consistently, and effectively and reflect ways to motivate learners for active engagements in class. Third, the concurrent development of the instructor and learner portfolio helps them understand what each is doing and they should do by monitoring each other in a constructive manner. Lastly, the OER movement through the KHU KLAS-Portfolio system provides a good model case for other universities in developing their own system while also helping them share their own courseware (inter)nationally. Given that such an effort is an educational contribution to society, all universities should do their best to provide good learning resources for the public to lessen the ‘knowledge/information divide’ using the technology available. There are, however, a few limitations in developing and implementing the current system and services. First, instructors should have more awareness and willingness to open their classes to meet social demand. Second, there should be ways to alleviate the burden for lecture videotaping and authoring of materials. Third, the institute should resolve copyright issues for materials cited or used in class through legal consultation. Fourth, more advanced technology support is necessary for producing high quality open courseware. Fifth, the government and university should find ways for active utilization of developed programs and materials. Sixth, more efforts should be made to motivate learners’ participation on a voluntary basis and promote constructive interaction between instructors and learners, through linking the two portfolio systems and staff support in both on- and offline contexts.

4. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

The effects of CALL software on teaching English pronunciation and TOEIC

Ayako Suto
Uchida Yoko Co., Ltd
Tokyo, Japan

Yoshiaki Kobayashi
Uchida Yoko Co., Ltd
Tokyo, Japan

Hiroyuki Obari
Aoayma Gakuin University
Tokyo, Japan

Abstract

In this presentation we will introduce and demonstrate the effectiveness of the ATR CALL BRIX system in teaching English prosodic and segmental features, as well as TOEIC. This software system is included as part of an integrated course incorporating e-learning with mobile technologies. The ATR CALL BRIX is an e-Learning system and includes several learning courses such as the Basic Skill Training Course and the TOEIC® Test Official Training Course. The courses contain a wide range of contents including ATR’s original database of 15,000 words with speech samples from over 30 native speakers. We will also introduce the TOEIC Test Official Training Course which includes the official TOEIC contents offered by the Educational Testing Service (ETS).

Keywords: ATR, TOEIC; Mobile Technologies; M & E-learning

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1. Introduction

The ATR CALL BRIX is an English e-Learning system developed by the Advanced Telecommunication Research Institution (ATR) in Kyoto, Japan, and has been distributed by the UCHIDA YOKO CO., LTD mainly into institutions of higher learning and companies throughout Japan. This is a client server system that provides English learning contents by use of Internet Explorer®. Most of its system administrators have allowed students or employees to access the server from outside their intranet, which has effectively and conveniently provided learners with a ubiquitous learning environment.

2. Method

2.1. Bottom-up method for basic skill training

Through a sequence of experiments conducted by ATR, the bottom-up method has been developed as an efficient way to learn English for native speakers of Japanese. This method has been adopted for the ATR CALL BRIX system for basic English skill training. For instance, learners begin training with an exercise that
includes listening to minimal pair contrasts, and then they progress on to the next level of counting the number of syllables contained in the target English words.

For the purpose of training in basic English skills, a database of 15,000 English words had been created. The database also contains sample speeches from over 30 native speakers of American English, and each item contains distractors for efficient vocabulary building.

2.2. TOEIC® Official Training Course

The second software we will introduce is from the TOEIC® Test Official Training Course, which contains the official TOEIC® contents offered by ETS, which is a nonprofit organization which develops and provides various kinds of academic assessments. In recent years in Japan, the TOEIC® test has become a common assessment test for the purpose of measuring business English communication skills. According to public data of the Institute for International Business Communication (IIBC), which provides TOEIC® in Japan, 2,312,000 examinees took the test in 2012.

This course is designed not only for practicing the TOEIC® test in order to attain higher scores on the real TOEIC® test. It also includes vocabulary development, shadowing practice, and dictation exercises with qualified TOEIC® official contents in order to build up and improve English skills.

3. Discussion

Increasingly more Japanese companies have required of their employees a higher level of English proficiency so that they can communicate effectively in English with their clients in order to expand their business opportunities. This increased emphasis on English communication in Japan has not only driven business personnel but also university students to study English for the purpose of attaining higher scores on TOEIC, in order to improve their level of English proficiency as well as their chances of landing a better job.

Research data collected by Ishikawa and other project members (2011, pp. 296-300) revealed that the ATR CALL BRIX was successful in enhancing the English abilities of Japanese learners after using TOEIC® Listening and Reading test sections as an achievement test. There were two groups of subjects involved in the study, one being a group of 24 university students and the other group being 56 employees of an IT company in Japan. Both groups of subjects attained higher scores on real TOEIC test after using the ATR CALL BRIX system. Subjects in the first group studied using the ATR CALL BRIX system for about 19 hours, with their average scores increasing from 432 to 521. The latter group of subjects used the system for about 20 hours, with their average scores increasing from 453 to 545.

4. Conclusions

ATR CALL BRIX is an English e-Learning system which aims to help learners to improve their English skills with its basic skill training course and TOEIC® test preparation course. In the future, some additional developments are necessary, such as enabling users to access the server from their smartphone and tablet device in order to provide them with a more ubiquitous learning environment.

5. References

Abstract

This paper reports on an international project called IPC (Internet, Project Competence), initiated by a German university in 2004. It has been expanded yearly. The latest one in 2012 had 111 participants, including 12 teachers from eight universities’ teacher-training courses of six countries: Germany, USA, Bulgaria, Spain, Japan and Poland. The project has three main learning objectives: project competence, internet competence, and professional expertise in pedagogies and education. This presentation evaluates the 2012 IPC project, focusing on the extent the educational goals stated above have actually been achieved, based on the following: (i) data collected through students’ activity for three months practiced on the Web platform of an SNS mixxt, together with pre-and-post English proficiency tests results; and (ii) the participants’ response data to a project end-survey covering 12 areas consisting of 50 questions created by the project leader, one of the co-authors Dr. K. Schultheis. As a result, the students’ activity data analyzed by nine topic groups on the common theme, “Children’s Perspective”, revealed that those students who actively participated (about one third of all students), could develop considerably their communicative competence in English, which is the basis for participating in an international project. Although about 71.7% of the respondents to the survey would recommend this project to other students because of its potential for attaining its goals, the survey results indicated that there was still room for improvement in its administration.

Keywords: international project; the project competence; the IT skills; the collaboration skills; ESP for future teachers; SNS

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1. Introduction
In any nation, every citizen, particularly a teacher, who is responsible for the age to come, is required to raise global awareness and intercultural understanding. The IPC international project presented here has been carried out based on the hypothesis that university students studying in a teacher-training course can most efficiently foster such awareness and understanding by working empirically on a common project entailing joint cooperation between students and colleagues from other countries and cultures (Ausband & Schultheis, 2010). By participating in the international project the students are expected to eventually attain the three main learning objectives of project competence, internet competence, and professional expertise in pedagogies and education, based on the premise that the students will be able to develop international communicative competence in the English language in particular.

Any international and collaborative enterprise can never be practiced or sustained without making use of technology, especially social networking technologies. To facilitate the participating students’ activity, using an SNS ‘mixxt’ (a social network kit provided by the mixxt GmbH), was a key to the success. The system customized specifically for the IPC was composed of tools and functions using Web 2.0 technology, such as Main Page, Members Book, Forums, Groups Sites, Wiki, Files Box, Weblog, Chat Room, News and Time Schedule.

The latest IPC international project was carried out by 111 participants from six countries in 2012 from October through December, working on nine group topics under the main theme of “Children’s Perspective on School, Teaching and Learning”: Group_1: How do students perceive their teachers?; Group_2: How do children with special needs experience school?; Group_3: How did students experience the transition from kindergarten to elementary school?; Group_4: How do children experience homework?; Group_5: How do children experience class rules?; Group_6: Students’ perception of media, computer games and gadgets; Group_7: How do children experience their free time and hobbies?; Group_8: How do children experience teaching strategies?; and Group_9: What do children think about the future?

Then, the presenters evaluated the 2012 IPC project from two viewpoints: (1) how the project was successfully conducted; and (2) what effects there were on the three learning goals as well as the development of communicative competence in English.

2. Method

The following three major materials were employed in evaluating the project.

2.1. Data of forum discussions

All participating students and teachers registered themselves as members of any of the nine topic groups. Twelve teachers joined in more than one or all of the groups as advisors or prompters, while the 99 student members were classified into any one of the nine topics according to their individual interests. The participants of each group proceeded with their project jointly on the group topic by discussing in their Group Forum. The number of members and forum posts in each group respectively were as follows: Group_1, 18 & 230; Group_2, 17 & 89; Group_3, 17 & 162; Group_4, 20 & 132; Group_5, 22 & 123; Group_6, 16 & 51; Group_7, 16 & 94; Group_8, 13 & 68; and Group_9, 18 & 127, resulting in a total of 157 participants and 1076 messages posted.

2.2. Pre- and post- English proficiency tests

To assess the growth of the English communicative competence, Computerized Assessment System for English Communication (CASEC) tests developed by the Japan Institute for Educational Measurement, Inc. (JIEM) were administered to the 13 Japanese students as an experiment group before and after carrying out the project. The test measured the students’ proficiency in four fields: vocabulary, expression, listening for main points, and dictation, in accordance with an item response theory.

2.3. Data from the project end-survey

The evaluation survey was uploaded onto the IPC website immediately after the project enabling all of the participants to answer worldwide. The survey evaluated the effect of 18 IPC concepts and methods, and the extent of attaining the learning objectives through 12 detailed questions, each rated accordingly on a five rank scale. It also examined how much difficulty the students had in 11 concrete items or conditions and invited any positive and negative comments or suggestions from students besides asking their likes and dislikes of the project.
3. Discussion

The total number of the participants in the nine topic groups and the posted messages into the groups’ forums as well as into the common general forum indicated that the project itself had been successfully undertaken. However, it also revealed that the extent of how actively the students participated in the project was considerably varied, depending on each participant. That is why some active students pointed out in the end-survey that they felt it unfair that they had to take much more responsibility than some other members.

Nevertheless, despite the active student participants’ complaints, these students, by being obliged to work harder than the other inactive students within a group, could apparently show development in their English proficiency test results, particularly in the field of vocabulary. Any clear improvement of all subjects could not be observed in the average scores, probably due to the shortness of the three months period.

To sum up the cross analysis of the survey results, the following could be observed: (1) the IT competence goal had been achieved; (2) regarding professional expertise, the project was effective enough to fully motivate the students; and (3) the students became quite interested in and appreciated their experience of being involved in an international project, though they found working in such a group not to be an easy task.

4. Conclusions

Overall, the project was highly evaluated as supported by the high ratio of students’ recommending it to others. Reproducibility of the tentative results briefly discussed above must be verified in the following 2013 project, in which all suggestions for improvement in administration from the students such as time scheduling and fair job assignment will be incorporated.

5. Acknowledgements

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6. References

A validity assessment of the comprehensive CALL system developed on the Three-Step Auditory Comprehension Approach

Junko Takefuta  
Osaka University  
Osaka, Japan

Mitsuru Doi  
Chiba University  
Chiba, Japan

Nobue Yonaha  
Bunkyo Gakuin University  
Tokyo, Japan

Hideo Takahashi  
Chiba University  
Chiba, Japan

Abstract

The Japanese have conspicuously low levels of English proficiency. In order to solve the long-standing problems related to the low proficiency levels, Y. Takefuta (1982, 1984, 1898, 1997) developed a comprehensive theory called the Three-Step Auditory Comprehension Approach (TSACA). We have developed a communicative–functional CALL system based on his theory. Since 1997, our system has been used in various educational environments, including universities of various levels and senior and junior high schools. It has been used mostly in regular English classes and, in one case, an experimental class.

The validity and efficacy of the system were examined using four methods: (1) questionnaire surveys, (2) objective tests, (3) comparisons of scores between experimental and control groups, and (4) the grades that learners received when they went to study abroad. Putting together all the data from repeated observations to ensure reliability, consistency, and confirmation, we concluded that our system is valid and effective enough to meet the needs and solve the problems related to English proficiency in Japan.

Not all attempts to help students improve their low English proficiency with our system were successful. However, when we carefully examined the possible reasons for failure, we found that our system was not used as the comprehensive one we developed on the basis of TSACA.

Keywords: Communicative–functional CALL; Three-Step Auditory Comprehension Approach; comprehensive system; Functional System; Cooperative System

1. Introduction

The Japanese Ministry of Education proposed in 2012 that university English teaching in Japan should aim to achieve student scores on the TOEFL-iBT equal to the world average (that is, 80) because the present average score in Japan (70) is not acceptable for the people of a country dependent on global trade for its survival. The Ministry of Education added that the ultimate goal is a level of English proficiency that allows speakers to make business transactions and conduct global research activity in English.
We have other problems related to English proficiency in Japan. The percentage of students who express negative attitudes toward English lessons in school increases every year, as does the percentage of students who say that they cannot understand what is going on in English class.

In order to solve these longstanding problems, Takefuta (1982, 1984, 1989, 1997) developed a theory called the *Three-Step Auditory Comprehension Approach (TSACA)*. We have developed a communicative–functional CALL system based on his theory.

Our system is composed of two subsystems: the *Functional System* and *Cooperative System*. The former comprises four components: *Core System, Unified System, Integrated System*, and *Control System*. The latter, in contrast, comprises eight components: *Learner, Instructor, Courseware, Curriculum, Delivery System, Time, Friend, and Environment*. A full, dynamic contribution from each of these components is expected and required in order for our CALL system to achieve the goals of TSACA.

2. Method

We evaluated the validity of the theory and the system first by using the four criteria for effective teaching of listening proposed by Rost (2001) and then by comparing the components to those of the instructional systems approach model proposed by Dick et al. (2008).

Since 1997, our system has been used in various educational environments, including universities of various levels and senior and junior high schools. It has been used mostly in regular classes, except in one case in an experimental class.

3. Results

3.1. Evaluation of the validity of TSACA

By carefully comparing the criteria proposed by Rost (2001) and by Dick et al. (2008) with the choices we made in developing our own CALL system, we concluded that the theory and the system both satisfy the criteria.

3.2. Results of questionnaire survey

The 11,682 students of one national university have used our system since 2001. When asked if they were satisfied with the CALL class, 85% of them responded positively (Doi & Y. Takefuta 2012). Further, when the system was implemented in 27 junior high schools, 77% of the 919 students responded positively to the question of whether they could understand class activities. They also expressed confidence that our system could help them improve their listening and speaking skills.

3.3. Results of objective test

Sixty-four students of a national university used our system to learn English from 1997 through 1999. After studying under the system for five months, they reached an average score of 538 on the TOEFL Paper-based Test, higher than the world average of 535 (Educational Testing Service 2001). The average of the top third of this group was 581; seven students from this group continued study for another six months on their own, and scored an average of 595 at the end of that period.

3.4 Results of controlled observation

In a private university in Tokyo, the efficacy of our system was assessed using the method of controlled observation. Fifteen students in an experimental class improved their TOEIC (Test of English for International Communication) scores by an average of 100 points after studying under our system, while students in other classes who were being taught using traditional methods improved their TOEIC scores by an average of only 29. On the reading section, the gap was even greater, with an improvement of 46 points for the experimental group but only 6 for the control groups.
3.5 Grades and jobs

Thirty students from the private university went abroad to study; six of them had studied hard using our system beforehand. The grades these students received at their exchange schools were mostly A's and B's. They expressed positive impressions after returning from their study-abroad experience, saying they had not had much difficulty following lectures or communicating with their classmates. They also said that our courseware was easy and fun to use, and helped them naturally improve their English proficiency. After they graduated from university, many of these students were hired by global corporations, and we often receive e-mail messages to tell us that they enjoy using English at work.

4. Conclusions

Considering the data we have collected, we conclude that our system is effective at meeting the needs of Japanese graduates for English proficiency, as identified by the Ministry of Education, and thus solving a part of the problems we have with English ability in Japan.

Not all implementations of the system were as successful as the ones we have discussed above. When we examined the reasons for the failures, we found that they were not using our approach as intended, as a “total system.” For example, most of the less successful attempts were seen in cases where the students were not spending adequate time using the system. In one unsuccessful case, the delivery method was not suitable for our CALL system. Often, students studied only passively, not actively. Teachers did not always motivate the students properly. In this light, we want to conclude our report by citing the warning given in Dick et al. (2008, p. 1):

The instructor, learners, materials, instructional activities, delivery system, and learning and performance environments interact and work with each other to bring about desired student learning outcomes. Changes in one component can affect other components and the eventual learning outcomes; failure to account adequately for conditions within a single component can doom the entire instructional process.

5. References


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Abstract

Vocabulary is an area that requires foreign language learners to work independently and continuously both in and out of class. In the Japanese EFL setting, more than 97% of the population experiences approximately six years of English education at secondary school during which time they are supposed to learn approximately 3,000 words (i.e. lemmas). Given the lexical distance between Japanese and English, this leaves Japanese university EFL learners with a long way to go before they can acquire a sufficient number of words to comprehend authentic texts in English. To help Japanese university EFL learners sustain their vocabulary learning, the researchers have developed Lexinote, an e-portfolio system that allows learners to record and save the target words they encounter online, to search for them in online dictionaries, to practice them in several ways, including written and oral rehearsals according to word familiarity (i.e. level of understanding of each lexical item), and to share their own output with peers. Learners are guided to monitor and control their vocabulary learning metacognitively according to word familiarity. Lexinote also provides learners with multimedia materials such as audio lessons for business and academic vocabulary development and online video lectures to prepare for classes conducted in English. Instructors can monitor students’ learning records by number of words recorded, by type of practices chosen, and by how frequently they edit their learning records. This paper introduces the key concepts and basic functions of Lexinote and discusses how it can benefit both learners and instructors.

Keywords: Vocabulary learning; e-portfolio; vocabulary learning strategy

1. Introduction

Vocabulary is central to language and is of critical importance to the typical language learner. (Zimmerman, 1997, p. 5). For many language learners, especially in a foreign language setting, vocabulary learning is a long
and arduous process as they need to learn 8,000-9,000 word-families for written text and 6,000-7,000 word-families for spoken text to cover 98% of text for unassisted comprehension (Nation, 2006). This usually means that foreign language learners are required to work independently and continuously out of class to acquire sufficient vocabulary. In Japan, learners are supposed to learn approximately 3,000 words (i.e. lemmas) in secondary education (MEXT, 2009). Therefore, learners who continue to study English at a tertiary education level still need to learn an enormous number of words even after their six years of English learning. Besides the challenge of the quantity of words, or width of vocabulary, learners need to know various aspects of words, or depth of vocabulary, if they want to use the language effectively. English class hours for Japanese university students are not usually adequate to cover this learning burden, and learners are in need of assistance for their sustainable vocabulary learning.

The teaching and learning of vocabulary learning strategies (VLS) can play a significant role in solving such problems in foreign language vocabulary learning. VLS research has reported on the effects of particular strategies or combinations of strategies (Brown & Perry, 1991; Ellis & Beaton, 1993), on the effect of metacognitive strategy instruction (Mizumoto & Takeuchi, 2009; Rasekh & Ranjbary, 2003), and on proposals for VLS instruction (Fowle, 2002; Schmitt & Schmitt, 1995). On the other hand, it has been found that learner use of VLS changes over time depending on their development in the target language (Schmitt, 1997); thus, an effective strategy for one particular learner is not always effective for others. The difficulty in identifying an effective combination of strategies has also been questioned (Sawyer & Ranta, 2001). However, one promising line of research is in the use of metacognitive strategies, the monitoring and controlling of other cognitive strategies (Gu & Johnson, 1996; Mizumoto & Takeuchi, 2009; Rasekh & Ranjbary, 2003). It can be inferred that learners should be trained to monitor and control various VLS metacognitively according to their general level of proficiency and their level of understanding of each word.

To tackle the issue of sustainable vocabulary learning, the researchers developed Lexinote, a web-based e-portfolio that enhances the metacognitive use of VLS and promotes independent and continuous learning. This paper will describe its basic functions and discuss how it can benefit both learners and instructors.

2. Development of Lexinote, an e-portfolio for sustainable vocabulary learning

2.1. What is Lexinote?

Lexinote is a web-based e-portfolio that helps language learners visualize their vocabulary knowledge so that they can monitor and control their own learning processes and products. Lexinote can be used not only as a self-study tool but also as a way to feed assignments in class. Typically, learners search for a word in an online dictionary or meet a word in an assignment and record its information: meanings in L1, definition in the target language, sample sentence, related words (e.g. synonyms, antonyms, collocations), and their own sentence containing the target word. Later, as their understanding of each lexical item grows, learners edit its information and continue to rehearse the word until it becomes knowledge at their disposal.

Lexinote uses the notion of word familiarity as an indicator of learners’ understanding of each lexical item. Through the use of word familiarity, learners are expected to monitor and control their own vocabulary learning metacognitively. Although vocabulary knowledge is sometimes conveniently dichotomized into two categories—receptive and productive—for educational or research purposes, the boundary between the two categories is vague, and Melka (1997) suggests that the distinction be avoided or even abandoned. Using the term familiarity, she also insists on the need to recognize different levels or a continuum of vocabulary knowledge. In order for learners to reflect on the state of their knowledge, Lexinote employs five different levels of word familiarities: (1) I have seen this word, (2) I know its form and sound, (3) I can recall the word from its L1 equivalent, (4) I can recall the word in an example sentence, (5) I can make my own sentence with the word. Learners are required to choose the appropriate level of word familiarity each time they register a target word and edit its information in the system so that they become aware of their state of knowledge. Learners can adjust the word familiarity manually themselves or have the system automatically adjust it according to the type of rehearsal completed.

2.2. Vocabulary learning strategies and Lexinote

The monitoring of vocabulary knowledge based on word familiarity is one form of metacognitive vocabulary learning strategy use; however, Lexinote also targets other cognitive VLS that can be metacognitively controlled by learners. Schmitt (1997) proposed two types of VLS: discovery strategies and consolidation strategies. A discovery strategy is one learners use when they try to identify the meaning of a word, such as guessing the
meaning from context and looking a word up in the dictionary. *Lexinote* targets seven types of consolidation strategies: oral rehearsal, written rehearsal, note-taking, reference, organization, language exposure, and metacognitive control. Table 1 shows the relationship between each VLS and related *Lexinote* learning activities.

Table 1: Vocabulary learning strategies and related learning activities on Lexinote

<table>
<thead>
<tr>
<th>VLS</th>
<th>Description of VLS</th>
<th>Learning activity on <em>Lexinote</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Rehearsal</td>
<td>Recalling or reading out loud phonetic aspects of a word, mapping meanings on its sound form, repeating out of a word</td>
<td>- Rehearsal 1: recalling meanings from sound of a word (Yes/No)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Rehearsal 2: recalling and typing a word from its sound (also written rehearsal)</td>
</tr>
<tr>
<td>Written Rehearsal</td>
<td>Recalling or writing of orthographic aspects of a word, mapping meanings on its written form, repeated writing of a word</td>
<td>- Rehearsal 2: recalling and typing a word from its sound (also oral rehearsal)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Rehearsal 3: recalling and typing of a word from L1 equivalent</td>
</tr>
<tr>
<td>Note-Taking</td>
<td>Recording and using the information of a word (e.g. related words, definitions)</td>
<td>- Recording and revising of a word information on the item window</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Using spreadsheet output from</td>
</tr>
<tr>
<td>Reference</td>
<td>Reinforcing knowledge by the use of the dictionary</td>
<td>- Referring to online dictionaries (English-Japanese, thesaurus, learners’ dictionary)</td>
</tr>
<tr>
<td>Organization</td>
<td>Networking of words by relating known words to unknown words, grouping words together, comparing similar words</td>
<td>- Recording related words (e.g. collocation, synonym, antonym) in the item window.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Referring other users’ information or related words (e.g. collocations, synonyms, antonyms)</td>
</tr>
<tr>
<td>Language Exposure</td>
<td>Securing opportunities to be exposed to and to use the word in context</td>
<td>- Making a sentence with the target word and save as Self-Expression</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Sharing learning outcomes such as self-expressions,</td>
</tr>
<tr>
<td>Metacognitive Control</td>
<td>Monitoring, controlling of learning, self-initiating of a word</td>
<td>- Setting, adjusting, monitoring of word familiarity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Choosing words to be rehearsed</td>
</tr>
</tbody>
</table>

3. Discussion

As *Lexinote* helps learners visualize the words they meet, record, practice, and use, it will be of benefit to both learners and instructors in monitoring and controlling sustainable vocabulary learning. It is learners and their instructors who are at the center of learning, not the algorithm of a system that automatically controls overall learning. Constantly seeing what they are learning, and what they have learned, learners can better understand their current status and future goals in their own vocabulary learning. Understanding what and how learners have and have not learned, instructors can better assist them by providing appropriate assignments and advice.
4. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Using CASLR to estimate individual word difficulty

Cornelia Tschichold
Swansea University
Swansea (Wales), UK

Abstract

In order to shed some light on the difficulty of individual words, a long-term CASLR (computer-assisted second language research) study was conducted. An adult beginning learner of Welsh used an electronic flashcard system over a period of three years, with the software automatically collecting the data during the study sessions. This data on the number of repetitions for each flashcard was then analysed according to various criteria, in order to find any factors that could predict the difficulty of an individual word for a learner.

The data confirms a number of previously known facilitating factors, such as cognate status, absence of polysemy or homonymy, and also that words are easier to learn in thematic groups than in semantic groups. Other results are more surprising, e.g. the fact that Welsh spelling is not as easy to acquire as could be expected for a reputedly shallow orthography. Adjectives are quite difficult to learn, whereas nouns are relatively easier. The data analysis sheds some new light on the complexities of the process of incremental vocabulary learning.

Keywords: CASLR; vocabulary learning; word difficulty; Welsh

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1. Introduction

Vocabulary learning is generally well suited to autonomous language learning situations. The traditional method of studying lists of words with their translational equivalents can be made considerably more efficient by using individual word cards or electronic flashcards that can be shuffled independently of their original list. Spaced repetition methods allow for more efficient use of the time spent learning foreign language vocabulary. However, there are also disadvantages to this method. While in the early stages of learning a language intentional vocabulary learning is vastly more effective than incidental vocabulary acquisition, it is also obvious that not all words are equally difficult. Knowing which words are likely to require more of a learning effort than others could help to improve the efficiency of paired-associate word learning.

2. Method

Data gained from a long-term single subject study was used to estimate the difficulty of individual words. An adult learner of Welsh as a foreign language participated in a course for complete beginners for a period of three
years. The communicatively-oriented course consisted of written materials and CD-ROMs containing much of the material in spoken form. This material was used in a traditional face-to-face class that met for one hour a week. As homework, learners participating in the course were asked to complete a few short exercises between lessons each week and to learn the vocabulary. The subject in this study used VTrain (http://www.vtrain.net/), an electronic flashcard system that uses spaced repetition, for the vocabulary learning process, and practiced the course vocabulary a few times each week for short (10-20 minutes) study sessions, with longer breaks in the summer. The flashcards were used for learning in both directions (i.e. Welsh to English and English to Welsh) and contained only the written words; no illustrations or audio files were added to the flashcards. As the learner uses VTrain for vocabulary study, the system records the total number of ‘views’ and the highest ‘box’ reached for each word card. This is the data that was then used to shed some light on differences of word difficulty among the several hundred vocabulary items in the beginners’ Welsh course.

Once this data had been copied into a spreadsheet, grammatical items and phrases consisting of more than one word were deleted and the remaining 670 words coded for part of speech. The largest proportion of words turned out to be nouns, followed by roughly similar numbers of verbs and adjectives.

3. Discussion

In a first step, the words with the highest number of repetitions were examined. This led to two separate hypotheses, i.e. that some word classes are more difficult to learn than others, and that spelling may contribute to word difficulty. Welsh is often said to have a very shallow orthography (as opposed both to English and to some of the other Celtic languages), so this was an unexpected finding. Laufer (1990) lists a number of factors that make a word more difficult, including difficult phonology, irregular inflectional pattern, polysemy, homonymy and idiomaticity. Part of speech was found to have no effect on word difficulty. For the Welsh data, part of speech does seem to play a role, however: adjectives are harder to learn than verbs, which in turn are harder than nouns.

The number of strongly polysemous and homonymous words in the data set is very limited, but clearly supports Laufer’s (1990) finding that these are impeding factors. Tinkham (1997) posits that words are better learnt in thematic sets than in semantic sets, and this is also supported by the Welsh data examined here. Cognate status also facilitates acquisition, as can be seen quite clearly when examining the number of repetitions needed to learn the many loanwords from English. Unless the Welsh spelling is difficult, these words are quite easy to learn.

To explore the role of spelling, the outliers with particularly high repetition scores were looked at. Compared to Germanic and Romance languages, Welsh uses the letters h, w, and y more often, in addition to having a few specific digraphs, e.g. ll (an alveolar lateral fricative) and dd (voiced dental fricative). All of these spelling characteristics seem to contribute to word difficulty.

The spacing algorithm was also analysed. It had been set up in such a way that the interval from one repetition of a word to the next roughly doubles in time with each repetition. In addition, the direction of questioning changed from Welsh > English, to mixed, to English > Welsh at every step. As could be expected, the English to Welsh translation (corresponding to active use of vocabulary) led to more words not being translated correctly and therefore returning to the first box. However, it was not the first box requiring translation into Welsh in the sequence that led to the highest number of words being returned to the starting box, but the box that came after a four-week gap to the previous repetition.

4. Conclusions

The findings point to a number of conclusions, apart from exposing the simplification that six to eight repetitions (cf. Nation 2001) suffice to learn most words is exactly that: a gross over-simplification. Words differ dramatically in the number of repetitions an individual learner is likely to need before we can say that they are anchored in memory. And even at that stage, all we can say is that the learner has memorized the L1-L2 pair of words. Deeper vocabulary knowledge (syntactic behaviour, collocations, etc.) cannot be tested in this way.

Ideally, the spacing algorithm would change depending on the individual word difficulty. Cognates and nouns could use a route with fewer repetitions, while adjectives and difficult to spell words would receive more attention. Words belonging to semantic sets should not be introduced at the same time (even if the course material lists them in the same lesson), and if necessary, be separated artificially. For all words, the spacing
algorithm should take into account the fact that translation into L2 is more difficult than translating from the L2 to the L1.

5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Tiered dissemination in a three-year plan to make digital learning ubiquitous in the educational system

Jane Vinther
University of Southern Denmark
Odense, Denmark

Abstract

Teacher perception and attitudes are crucial factors in the adoption of new media in educational approaches to language teaching and learning. The more so if teacher autonomy is valued as an integral part of the educational philosophy. This paper outlines the process of originating, sustaining and developing teacher engagement in and ownership of the ultimate goal of turning foreign language teaching towards a revitalised and methodologically updated approach. The aim has been to encourage a more student-aligned approach by utilising new media across the high school system of the country. The whole project was rooted in the belief that an incremental dissemination in a tiered three-year plan of development would see permanent changes as more and more schools and teachers became involved in increasingly diverse uses of digital teaching and learning.

The originating set of ideas for the development project arose out of a desire on the part of the educational authorities to strengthen foreign languages and to make foreign language learning an attractive option for high school students. The high schools were encouraged to engage their teachers of foreign languages to develop projects with the new media and digital learning providing a contemporary frame. The individual projects were assisted and qualified through the support of researchers allocated to the project in cooperation with a national project steering committee.

Keywords: Curriculum development; CALL and pedagogy; collegial cooperation; teacher and learner autonomy; systemic development

1. Introduction

There are two common ways of bringing about institutional change in pedagogical practices on a large scale: the top-down approach and the bottom-up approach. Both are valid and have been applied in educational contexts, both nationally and internationally. Both have merits and difficulties attached to them, and these need to be carefully weighed in a contextual goal setting in aiming for a specific trajectory (Borg, 2006). In the present project it was decided that the policy would be to combine the two approaches in order to secure the broadest basis for bringing about permanent change.
2. Method

2.1. Aim and policy

As is the case in so many other countries, in Denmark English is the dominating language in the field of foreign and/or second language learning, and in order to encourage the learning of other languages and to bring language learning into alignment with the lived experience of social media’s influence on young adults (Stockwell, 2006), it was decided to establish a framework which would encourage these two primary goals in one project. The policy aimed at making language learning more prominent in the minds and choices of high school students.

2.2. Teacher involvement

It is received knowledge that enthusiastic and dedicated teachers can make nearly every innovative method become a success, and therefore it was an obvious strategy to involve high school teachers in the development of the whole project right from the start. As Borg and Al-Busaidi (2012) have demonstrated, teacher perception is an invaluable ingredient that will influence any policy initiative, and therefore it is important to take into account how a given policy will be perceived and consequently transformed into classroom performance.

The current project was initiated by the Danish ministry for education, which communicated to the network of high schools that the ministry intended to make money available for development projects in foreign language teaching and learning. There were two conditions, namely that the high schools themselves should find some of the funding in their own budgets, and secondly, that the projects should originate from the ideas of the teachers at the schools to ensure that the individual teachers as well as the schools had a claim in the ownership of the projects. Applications for inclusion of the individual projects were sent to the ministry of education and a selection process resulted in the most innovative and relevant projects being selected for inclusion in the scheme. The same procedure has been carried out three consecutive years resulting in inclusion of high schools which geographically represent all regions of the country.

2.3. Researcher involvement

In order to support the groups of language teachers in their projects with a theoretical foundation, each high school project was assigned a researcher who could provide a theoretical grounding of the project.

High schools teacher have a sound content knowledge of their topic (i.e. a foreign language and language teaching), of their students and of the institutional and pedagogical context in which they conduct their teaching (Abbitt, 2011). The researchers are specialists in the theoretical underpinning of second language acquisition, computer assisted language learning and special focus areas such as reading, writing, interaction, feedback and other related topics. Together the two groups combine specialist knowledge (Chapelle, 2009) which can be employed in cooperation with the students and address their needs.

3. Discussion

One of the most important issues that needs to be considered in this kind of process is the discourse between teacher and researchers. Ellis (1997) has outlined the difficulties in transforming research findings into pedagogical action in part due to the lack of common discourse between practitioners and theoreticians. This project initially experienced some instances in which the need for establishing a common discourse of understanding was tangible.

The essence is familiarisation and ownership. The individual projects were conceived by teachers, or cooperative groups of teachers, who had invested ideas, time and emotional energy in developing projects they perceived as important and interesting, and they were slightly sceptical towards researchers who tried to theorise their framework.

The researcher group, on the other hand, saw it as vital that the projects were grounded in theoretical knowledge which could support not only the projects but also the teachers in their understanding of the wider perspectives of their practices. For this purpose the common biannual seminars cannot be rated highly enough. At the seminars, the presentations and discussions served the common purpose of rapprochement between the groups.
and simultaneously creating an understanding of a common goal of bringing about change in pedagogical practices which would be justified in both experience and theory (Vinther, 2005).

Furthermore, the researchers designated to each project group have had the role of consultants in relation to providing the individual high school teachers and the project groups in general with knowledge from relevant research in the field when the need arose. In turn, the individual project participants have been committed to disseminate knowledge on both theory and gained experience in pedagogical and technical applications of the new methodologies.

4. Conclusions

The teachers are highly interested in introducing the new media and CALL applications because they are interested in their students and their profession and the language(s) they teach. They are willing to invest considerable amounts of time in preparation of classes and in the tools they have to familiarise themselves with. They have been aided in this by researchers who have made it possible for the teachers to upgrade not just themselves but also a wider circle of colleagues at their own schools through having become able to argue for their practical experiences through sound theoretical argumentation. This has fertilised the teaching and learning environment for permanent change and for more autonomy for teachers and students, as well as making language teaching and learning more interesting while modernising pedagogical approaches towards more CALL and media-embraced content and methods.

5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Cross-cultural videoconferencing and online discussion experienced by college students in Taiwan: A case of collaboration with American students

Ai-Ling Wang
Tamkang University
New Taipei City, Taiwan

Abstract

This paper aims at describing how Taiwanese college students who are learning English as a foreign language experienced cross-cultural videoconferencing with students at University of Maryland, U.S.A.

Twenty-five Taiwanese college English majors joined the project and met at videoconferences with 28 students from University of Maryland. Both the two groups of students were taking courses relevant to Teaching English to Speakers of Other Languages (TESOL). A Moodle and a Facebook website were designed for this project. Students from the two classes met at cross-cultural videoconference 5 times in the entire semester. At the beginning of the project, teachers and teaching assistants from the two classes discussed via e-mail and decided on the topics to be discussed at the conference. In addition to introducing themselves, comparison of the educational systems in Taiwan and in the U.S and a lesson plan designed to introduce different Chinese and American festivals were proposed.

This research study is mainly a qualitative one. Data collected for this study include students’ postings on the Moodle and Facebook websites, videotaped videoconferences, students’ interactions and presentations at the conferences, classroom observations, interviews with students, and a questionnaire filled out by the students. Grounded theory method was applied to analyze qualitative data to allow significant patterns emerge. Findings of the study showed that students benefited from cross-cultural videoconferencing in a variety of ways, such as language, cultural, and professional learning and change of power relation.

Keywords: cross-cultural videoconferencing; online discussion; Taiwanese-U.S.A collaboration: Teaching English to Speakers of Other Languages

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1. Introduction

Advancement in modern technologies has allowed cross-cultural communications to be practiced in a variety of ways and through different types of electronic media. This paper aims to describe how Taiwanese college
students who are learning English as a foreign language experienced cross-cultural videoconferencing with students at University of Maryland, U.S.A.

Twenty-five Taiwanese college English majors participated in the project and met at videoconferences with 28 students from University of Maryland. Both the groups of students were taking courses relevant to Teaching English to Speakers of Other Languages (TESOL). A Moodle and a Facebook website were designed for this project. Students from the two classes met on the screen 5 times in the entire semester. At the beginning of the project, teachers and teaching assistants from the two classes discussed via e-mail and decided on the topics to be discussed at the conference. In addition to introducing themselves and their schools, comparison of the educational systems in Taiwan and in the U.S and a lesson plan designed to introduce different Chinese and American festivals were proposed. Before the first videoconference, students were asked to post on the Moodle website to introduce themselves and their schools as icebreaker. For each of the subsequent videoconferences, students were required to post their PowerPoint files for conference presentation on the project websites and comment on their partners’ postings. The author raised the following question for investigation: How can students benefit from cross-cultural videoconferencing?

2. Method

This research study is mainly qualitative. Data collected for this study included students’ postings on the Moodle and Facebook websites, videotaped videoconferences, students’ interactions and presentations at the conferences, classroom observations, interviews with students, and a questionnaire filled out by the students. In the present study, the author did not intend to test a hypothesis; rather, grounded theory method, which has a theory-generating nature, was applied to analyze qualitative data to allow significant patterns to emerge. The author first collected relevant data from different sources and then followed the coding procedure of grounded theory to generate significant concepts. Finally, the author looked for patterns from the data.

3. Discussion

Findings of the study showed that students benefited from cross-cultural videoconferencing in a variety of ways, including (1) language learning, (2) cultural learning, (3) professional knowledge, and (4) change of power relation.

3.1 Language learning

Findings of this study have shown that the interactions with native English speakers resulted in noticeable reduced language apprehension for the Taiwanese students and that students were highly motivated to learn English. Students were engaged in the cross-cultural interactions, and got to immediately see the effect their language in action could had on their learning of English as a foreign language. They used different communicative strategies in their communication with American students.

3.2 Cultural learning

In addition to language learning, students had heightened cultural awareness after communicating with American students. Students reported that they were particularly happy with the face-to-face discussions videoconferencing can provide. In the videoconferencing environment, culture learning was extended beyond the classroom into authentic and appropriate contexts of use, and this, in turn, may also enhance students’ critical thinking skills and direct them to see things from a different cultural perspective and with an international outlook. Gaining cultural awareness and enhancing cultural understanding are crucial in an era of globalization.

3.3 Professional knowledge

Both the Taiwanese and American students shared the same field of study—TESOL. They were eager to share their TESOL methodologies with and learn from their partners. Some special issues relevant to TESOL were raised for discussion. The enthusiasm for discussion was especially apparent when it came to comparing different language learning environments and different educational systems.

3.4 Change of power relation
In regard to the students having enjoyable and meaningful learning experiences, videoconferencing has allowed students to have their voices heard, in contrast to the traditionally teacher-dominant classroom. Students felt more comfortable to express themselves while discussing a topic of their interest with their fellow students. In the videoconferencing environment, students were seen to value an evenly distributed time to talk and the ethics of turn-taking.

4. Conclusions

The present showed that cross-cultural videoconferencing was beneficial to students’ learning of English as a foreign language, acquisition of American culture, and improvement of professional knowledge. In addition, the power-relation between teacher and student was also changed from a teacher-centered learning environment to a student-centered environment and more taciturn students were encouraged to express themselves at the conference.

Based on findings of the study, the author would like to suggest that future research on cross-cultural videoconferencing may involve students from different fields of study and/or learners of different target languages to benefit both partner groups in terms of their professional studies and language learning.

5. References


Abstract

CALL development is challenging in any context. There are technical challenges and it is also difficult to assemble the multidisciplinary team required for CALL development. In some situations, lack of teacher awareness, skill-set, confidence and training also make it a difficult process. There are, of course, pedagogical and logical issues to consider. In developing countries, there are often additional challenges. There may be a lack of computing resources. There may be a lack of access to those resources where they exist. In some contexts, other logistical issues (e.g. large class sizes, access to reliable power supply) may cause problems. This paper provides an overview of the difficulties for CALL in developing countries. It looks at the difference between CALL for Most Commonly Taught Languages (MCLTs) (e.g. English, Spanish), Less Commonly Taught Languages (LCTLs) (e.g. Arabic) and Endangered Languages (ELs) (e.g. Nawat) in this context. For Less Commonly Taught Languages, there are two situations to consider: the extent to which the language is well-documented and whether there are many (suitable) electronic resources available to learners. For Endangered Languages, there are additional issues to consider including quality of the language documentation, student motivation and socio-cultural issues within and outside the community. However, despite these difficulties, CALL can play a positive role in education in developing countries. This paper provides several examples of the potential of CALL for language learning and outside of language learning in these countries and this is to be welcomed.

Keywords: CALL in developing countries; Less Commonly Taught Languages; Endangered Languages; CALL potential; CALL in non-traditional contexts

1. Introduction

CALL development is challenging in any context. There are technical challenges and it is also difficult to assemble the multidisciplinary team required for CALL development. In some situations, lack of teacher awareness, skill-set, confidence and training also make it a difficult process. There are, of course, pedagogical and logical issues to consider. For example, the quality and suitability of the resources as well as their level of integration with the curriculum are important considerations. In developing countries, there are often additional challenges. There may be a lack of computing resources. There may be a lack of access to those resources where they exist or the resources may be old, slow and semi-obsoletr. In some contexts, for example primary

11 mward@computing.dcu.ie
and secondary school settings, other logistical issues (e.g. large class sizes, access to reliable power supply) may cause problems.

This paper provides an overview of the difficulties for CALL in developing countries. It looks the difference between CALL for Most Commonly Taught Languages (MCLTs) (e.g. English, Spanish), Less Commonly Taught Languages (LCTLs) (e.g. Japanese, Arabic) and Endangered Languages (ELs) (e.g. Nawat) in this context. For Less Commonly Taught Languages, there are two situations to consider: the extent to which the language is well-documented and whether there are many (suitable) electronic resources available to learners. For Endangered Languages, there are additional issues to consider including quality of the language documentation, student motivation and socio-cultural issues within and outside the community. However, despite these difficulties, CALL can play a positive role in education in developing countries. This paper provides several examples of the potential of CALL in developing countries. It looks at the case of Arabic, a Less Commonly Taught Language (LCTL), particularly in the primary school setting. It shows the potential of CALL in the case of a Central American language (Nawat/Pipil). CALL development is usually aimed at helping students learn a language, but it can provide other benefits beyond those of language learning and this has to be welcomed.

2. Method

There are approximately 7,105 spoken languages in the world (Lewis et al., 2013). In the CALL field, there is one dominant language (English), several Most Commonly Taught Languages (MCLTs), many Less Commonly Taught Languages (LCTLs) and a lot of languages that are not covered by CALL. This is not surprising as around 96% of these lesser-spoken, less-studied languages are spoken by just 4% of the world’s population (Crystal, 2000). Most of these languages are spoken in developing countries. Sometimes CALL resources do exist for some of these languages, but they tend to have minimum uptake or impact. It is important to note that the number of speakers and the availability of CALL resources are not necessarily related. Arabic is one of the most spoken languages in the world, with more than 422 million speakers and used by up to 1.4 billion Muslims (Bokova, 2012). However, it is a LCTL and there are not many CALL resources available to students.

This paper looks the needs and challenges of CALL for Arabic as an L1 in the primary school setting. There is a great need for CALL resources in this context. Over 25% of school lesson time is dedicated to teaching Arabic, rising to 38% in Egypt (UN Report, 2009), with school children required to parse and analyse Arabic syntax. 33% of the population in the Arab-speaking world is under 15 years old. With the drive to increase literacy, there are increased student enrolments and high pupil-teacher ratios (up to 39.1 in Egypt) (UN Report, 2009). Tounsi (2010) has proposed an Arabic Parsing Tutor to provide a flexible learning environment in which (L1) students can develop their understanding of Arabic grammar. The challenges include the lack of suitable electronic resources for the target learner group. There are Arabic corpora which could be used for CALL resources, but often their content is not suitable for young learners (e.g. the word “war” features frequently, while “Messi” and “football” are less frequent).

All the countries in Central America are developing countries (IMF, 2009). There are approximately 325 languages spoken in Central America (Ethnologue, 2013). Spanish is the dominant language and is spoken by the vast majority of people in the region. However, for a minority of the people, it is their second language. There are very limited CALL resources available for indigenous languages i.e. languages other than Spanish. This paper looks at the impact CALL resources can have on a language and on a language community. CALL resources were developed for Nawat over 10 years ago (Ward, 2001). It aimed to provide a basic CALL resource for interested learners, but as the developer did not live in the region, the potential impact would be limited. The resource is still available but probably not used very much. However, it served as a mechanism for bringing interested parties together and as a foundation for more recent CALL development (King, 2013). It served as a minor language documentation project, with recordings of two of the native speakers, one of whom (crucially) was literate. From a lowly start (estimated at 15-25 speakers), there are approximately 200 speakers (Lemus, 2010) and around 3000 students have studied the language (Garcia, 2009).

3. Discussion

CALL development is more difficult in developing countries. Apart from the extra practical difficulties (e.g. access to suitable computing resources and reliable electricity), there are also problems in terms of access to quality, (electronic) language documentation. However, despite these challenges, there is enormous potential for CALL in developing countries. Wakefield (2013) reports that Mitra has proposed a cloud-based school for
learners. Bearing in mind Davies’ (1997) CALL lessons, this is unlikely to be a silver bullet for language education, but could increase the development of and access to CALL resources for many of the world’s 7+ billion and rising population (UNDESA, 2013). The development of such CALL materials could also potentially contribute to language documentation projects for majority of the world’s languages which are endangered.

4. Conclusions

This paper looks at CALL in Developing Countries. It shows that CALL is under-utilised in these countries for a variety of reasons, but it has a lot of potential for education and societal purposes. Obviously, this paper is limited in scope and has only looked at two languages (Arabic and Nawat), but the same challenges and opportunities exist in many other similar language communities throughout the world.

5. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

Factors for sustainable CALL

Monica Ward
Dublin City University
Dublin, Ireland

Abstract

This paper looks at the factors for sustainable CALL and how to use software engineering and agile software development techniques to design, develop and deliver CALL resources. Sustainable CALL factors include real learner need, well designed, modular and usable software. Real world deployment factors are also important. These include institutional will, training, available computing resources and logistical issues. Colpaert’s ADDIE model and specifically his Global-Local-Differential-Targeted (GLDT) grid provide a solid foundation for analysing the targeted CALL design space and anticipating potential problems. The agile software development paradigm, with its iterative and incremental approach to development, can help to ensure that learners receive CALL resources that they can use in their normal learning setting. This paper looks at an example of how this hybrid (traditional + agile) software development approach has been used to develop CALL resources for L1 learners in the primary school context. Often projects of this type stall at the design stage due to a number of factors (e.g. lack of developer resources, lack of developer knowledge of the targeted CALL space and waning interest as the design drags on and no software is delivered). This paper shows how the combination of systematic analysis with close interaction with the teachers/end-users and frequent delivery of working software can be used to provide CALL resources in a real-world setting. This approach may not work for all CALL projects, but it was a fruitful combination in this particular context.

Keywords: sustainable CALL; Software Engineering; agile software development; primary school

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1. Introduction

If CALL resources are to be sustainable, they must address a learner need, be well designed and usable by the learner. Institutional support, training and deployment issues are also important. This might seem obvious, but it is not as trivial as it appears—there are many challenges to be addressed and difficulties to be overcome. This paper looks at the factors in designing, developing and deploying CALL resources that can be used by learners in real-world, outside of the research environment. It looks at the importance of the Analysis phase of CALL, and outlines how Colpaert’s (2004) Global-Local-Differential-Targeted (GLDT) grid can be a useful tool for this phase of a CALL project. Colpaert (2004) proposed an Analysis-Design-Development-Implementation-Evaluation (ADDIE) model for CALL development, which closely follows a traditional software engineering
model. This paper looks at how recent trends in software engineering, particularly the Agile Development paradigm, can be blended with Colpaert’s ADDIE model, to develop functional CALL resources.

The paper provides an example of how this hybrid software development model has been used to develop L1 CALL resources in the primary school context. It highlights the importance of analysis, modular design, working closely with the end-user (Farmer & Gruba, 2006) and having a flexible, adaptable approach. Davies (1997) first outlined key lessons for (sustainable) CALL in 1997, but many of them are still relevant for the development of sustainable CALL today.

2. Method

One of the big challenges in developing CALL materials is that it is a non-trivial task, which usually requires a multidisciplinary team, time to plan, design, develop and test the materials and the necessary financial and other resources. For many working in the CALL field, these resources are either not available or rather limited. This paper outlines at how a traditional software engineering/CALL paradigm (Colpaert, 2004) can provide a solid foundation for the design and development of CALL materials, regardless of the prevailing constraints. It is crucial that the CALL resources address a learner need and Colpaert’s analysis tools help in this regard.

In the field of software engineering, the agile software development paradigm (Beck et al, 2001; Martin, 2003) has emerged as an alternative to the traditional ADDIE (or Waterfall) model. It is based on iterative and incremental development, with a focus on a flexible and rapid response to change. It aims to deliver working software with close collaboration with the end-user. The two methodologies can be considered to be polar opposites, but in recent years the concept of hybrid or Agile Software Engineering has evolved (Aitken & Ilango, 2013). This uses the best of both approaches to deliver a working software product to the client.

This paper looks at how the use of a hybrid software engineering approach can be useful for developing CALL resources. It highlights how this hybrid paradigm can be used to address some of the difficulties in CALL development, in the situation where the CALL developer is not very familiar with pedagogical requirements of the learners, but is guided by the teacher. These include the needs analysis and designing learner-appropriate resources for the target learner group.

The paper provides an example of how this hybrid methodology was used to develop CALL materials for L1 learners in the primary school context. It does not make extensive use of all the tools available in the traditional and agile software development cannons, but leverages useful components from both approaches. Firstly, Colpaert’s (2004) GLDT grid was used to identify the needs of learners in the targeted CALL space. Once the needs were clarified and the potential benefits of CALL materials were identified, the decision was made to design and develop the resources. Given the particular characteristics of the CALL space (e.g. the learners were learning to read in their L1, novel for both developer and teacher), an iterative and incremental approach to development was useful for both the developer to understand what was required and for the teacher to see what could be done.

3. Discussion

One of the most important questions when undertaking a project in the CALL (or any) domain is: “Is there a real, underlying need for this resource?” If not, then serious consideration should be given to abandoning or re-thinking the project at the concept stage. However, sometimes it is not clear if this need exists. Colpaert’s (2004) GLDT grid is very useful at this stage as it encourages those involved in the project to consider the needs and requirements motivations of different actors in the CALL space. He recommends looking at the CALL space from the global (general) through to the specific target domain. The GLDT-grid proved useful, systematic approach in this context.

When working in a novel (or new to the development team) area, sometimes a prototype approach adopted as part of the CALL design strategy. However, there are several problems with this approach, as sometimes the decision is taken to use the prototype as a basis for the full system. This is not recommended for many reasons, not least the fact that the prototype is often not scalable and could have an ad-hoc design. Well designed, modular software, combined with an agile approach, can work well to overcome the problem of a CALL project taking so long to deliver that the customer or the project unravels before the learners gets to use any CALL resources. Furthermore, the importance of the involvement of end-user in the agile process (Chamberlain et al., 2006), was borne out in this CALL project.
4. Conclusions

Sustainable CALL means developing resources that are wanted and used by the learners. It involves considering real-world deployment issues throughout the project life-cycle. A hybrid or agile software development paradigm can help to ensure that the need actually exists and that usable CALL materials are developed and delivered to the target learners in their real-world setting. The project presented in this paper provides an example of how this approach can work in practice. It is only a small-scale project, and obviously, the issues involved in a larger project would be more complex. However, the CALL materials were developed to the satisfaction of the teacher, real learners used them in their normal school setting and the materials could be extended for future use.

5. Acknowledgements

The contribution of the primary school teacher and her students involved in this project should be acknowledged. The teacher worked closely with the developer at all stages of the project, in keeping with the agile paradigm. For research ethics reasons, the teacher and the school shall remain anonymous.

6. References


A comparison of international students’ use of a social wall and a discussion forum in an online course

Julie Watson
University of Southampton
UK

Abstract

VLE discussion forums have been widely used for online communication in educational contexts but they lack visual attractiveness. Moreover, research suggests that the main factor in student engagement and their successful implementation is the teacher’s skill in setting up and facilitating the discussion tasks. Social networking tools now offer exciting new possibilities for teaching and learning contexts, and may offer better alternatives to traditional online communication tools. Applications such as social walls/virtual corkboards are being tried in educational contexts to ascertain their effectiveness.

At the University of Southampton a pre-arrival online course has been offered to all incoming international students since 2011. The course design provides a sustainable model to allow for delivery year on year. It combines self-access, interactive English learning resources providing a taste of UK academic culture, English for academic purposes, and the city and university where the students will be living and studying. It offers students the use of a social wall and a discussion forum. These tools are open for students to freely use in the manner they chose. This presentation will introduce the online course and compare students’ use of the social wall and the discussion forum. It will consider how effective both tools are in meeting students’ needs in an untutored learning context using data collected from the platform and from the students themselves. Both tools were found to be used by students, although differently, and the social wall, in particular, proved to be a particular attraction for students on the course.

Keywords: Web 2.0 tools; online course; discussion forums; social wall; international students

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1. Introduction

Discussion forums are usually the most commonly used tool in virtual learning environments for tutor/student discussion. Yet, on many platforms these tools offer a rather unattractive interface. Research highlights that teacher skill in setting up and facilitating discussion is key to their successful implementation and to student engagement (Mazzolini and Maddison 2003; Northover 2002). Social networking tools offer new options for communicating online. Web 2.0 hosting services such as social walls (virtual corkboards) allow multi-media posts and can be used by groups or individuals. These walls allow customisation of messages, making posts...
visually attractive and potentially more appealing to students, and several are being tried in educational contexts (Ferlazzo 2011). This paper investigates the effectiveness of a social wall used alongside a discussion forum in a pre-arrival online course for all incoming international students to an institution. It considers how each tool can help meet students’ needs in an untutored learning context, using data collected from the platform and from students themselves. It compares use and seeks to identify each tool’s strengths.

2. Method

Since 2011 the University of Southampton has offered an online pre-arrival course ‘Get Ready for Southampton’ (GRfS) to all international students, providing acculturation and focusing on students’ pre-arrival concerns and needs, particularly regarding the location in which they will be living and studying: introducing practical aspects of British life and culture, effective study skills and ways of dealing with aspects of UK academic culture which could present challenges (Elanguages, 2013). This online course accommodates a large student cohort (over 2000) between May and October each year. Key features of course design are:

- automated course invitation, sign up process and account creation for students through a single entry point;
- study pace and length of use decided by each student;
- self-access course content (activity-based learning objects);
- untutored, but with a community-building dimension through use of social wall alongside student-led discussion forum

The self-access learning activities are designed with automated answers and feedback. In addition, the course environment (Moodle) contains two untutored communication tools - a social wall (see Figure 1) and a student-led discussion forum. Two freely available applications, Wallwisher/Padlet and Linoit, were trialled for use as the course social wall. These are web-hosted and do not require student registration. The walls can host short student posts, customised with images, emoticons etc., which are immediately visible.

Figure 1: Student posts on social wall (modified for confidentiality)

Students are invited to post wall messages on entering the course with the aim of facilitating the growth of the course ‘community’. Additionally, a traditional discussion forum is included to offer ‘overflow’ functionality, should students wish to engage in extended discussion.

3. Discussion

In 2011, 1623 students responded to the invitation email, created accounts and did the course. In 2012, this number increased to 2113, and in the current year 1107 students have subscribed during the first five weeks. These students are widely dispersed (105 countries in 2011; 130 in 2012) and are applying for a wide range of disciplines and study levels: Foundation Year, undergraduate and postgraduate level taught programmes, PhD programmes, and ERASMUS exchange programmes.
In 2012, using data from platform tracking of activity and student post-course feedback (anonymous online questionnaires), a comparison of students’ use of social wall and discussion forum was conducted. A first step in this was to gather students’ views of their use of the social wall. Approximately 8% (N=178) of the total course cohort sent feedback and their responses are summarised in Table 1. Although this represents a relatively small sample, only about one third (29%) did not look at the social wall. Of the two thirds that did, over one fifth posted a message and contacted another student outside the course via shared contact details (including use of culture-specific social media where students [Chinese] are blocked from access to western social media).

<table>
<thead>
<tr>
<th>Student survey respondents’ use of social wall in 2012</th>
<th>N=178 (8%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I did not open/read messages on the Social Wall</td>
<td>51</td>
</tr>
<tr>
<td>I only read other students’ messages on the Social Wall</td>
<td>44</td>
</tr>
<tr>
<td>I posted my own message on the Social Wall</td>
<td>37</td>
</tr>
<tr>
<td>I posted a picture with my message on the Social Wall</td>
<td>9</td>
</tr>
<tr>
<td>I contacted other students via their shared Facebook or RenRen (Chinese equiv.)</td>
<td>19</td>
</tr>
<tr>
<td>I contacted other students via their shared MSN or QQ (Chinese equiv.)</td>
<td>4</td>
</tr>
<tr>
<td>I contacted other students via their shared Twitter or Weibo (Chinese equiv.)</td>
<td>5</td>
</tr>
<tr>
<td>I contacted other students via their shared email addresses</td>
<td>12</td>
</tr>
</tbody>
</table>

Table 1: Survey respondents’ use of social wall in 2012

A direct comparison of students’ manner of using social wall and discussion forum can be seen in Table 2. This data was gathered from the platform itself. Since the course is untutored the discussion forum evolved according to students’ interests and concerns. Very few students attempted to discuss/ask questions through the wall. In contrast, much discussion occurred in the forum between students applying for the same course; from the same country/part of the world; seeking future housemates etc. 55 threads containing 167 posts were created by students. The discussion forum was viewed over 4000 times during the course. Images were much more frequently used when students were introducing themselves via the social wall (60). Contact details were also exchanged through the discussion forum although on fewer occasions. Data from student questionnaires concerning their use of both the wall and discussion forum was not available, so this comparison can only provide a ‘flavour’ of student activity using the two tools.

<table>
<thead>
<tr>
<th>Social wall 2012</th>
<th>Discussion forum 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall posts: 375</td>
<td>D/F posts: 167</td>
</tr>
<tr>
<td>Only one or two fledgling discussion attempts</td>
<td>No. of threads: 55</td>
</tr>
<tr>
<td>Not available</td>
<td>Page views 4000</td>
</tr>
<tr>
<td>Posts with image: 60</td>
<td>Posts with image: 4</td>
</tr>
<tr>
<td>Posts with email details: 53 (14%)</td>
<td>Posts with email details: 14 (8.5%)</td>
</tr>
<tr>
<td>Posts with social media contact details: 12</td>
<td>Posts with social media contact details: 6</td>
</tr>
</tbody>
</table>

Table 2: Comparison of students’ use of social wall and discussion forum in 2012

4. Conclusions

This paper set out to conduct an initial comparison of international students’ use of two tools, a social wall and discussion forum, in a pre-arrival online course. The data that could be drawn from was incomplete for this purpose and so generalisations about tool preferences are tentative. Nevertheless, from the level of student activity with each tool, it can be concluded that both can serve a useful role on an untutored course. Many students clearly wish to be facilitated in communicating with each other, and the tool inclusions appear to help in this, and help build a student community. Students posting on the social wall made use of message customisation features, which suggests that they appreciated the tool’s versatility and found it attractive in this
respect. In the main, their usage of the social wall was to introduce themselves, greet each other and exchange contact details. In contrast, the discussion forum was adopted primarily for question and answer purposes, with some wall replication in a small number of introductory posts containing contact details. Both tools received a significant amount of use by students. Feedback from students about the course has been very positive and the initial evidence seems to suggest that both the social wall and discussion forum have played a part in the enjoyment and benefits expressed by students. Views of the whole course website totalled 24,000 in 2012. Further growth in 2013 will allow more research to be conducted and it is anticipated that findings will be of interest to other CALL practitioners.

5. References


LEarning and TEaching Corpora (LETEC): Data-sharing and repository for research on multimodal interactions

Ciara R. Wigham
Clermont Université
Clermont-Ferrand, France

Thierry Chanier
Clermont Université
Clermont-Ferrand, France

Abstract

The number of online environments language teachers can employ is constantly growing, offering increased potential for multimodal L2 interaction analysis. This paper introduces the LEarning and TEaching Corpora (LETEC) methodology that links, following international standards, all elements resulting from an online learning situation, whose context is described by a pedagogical scenario and a research protocol. The corpus components include the learning design, the research protocol, the interaction data, all participants’ productions and licences relating to ethics and access rights. An XML schema allows interactions from different tools and environments to be stored and described in a standardized way, facilitating data analysis.

We explore the stages for building LETEC, from the design of an online course to analysis phases and the diffusion of results, and describe the Mulce repository developed for sharing these corpora. We then focus on ways LETEC methodology may contribute to sustaining CALL research beyond the hype of the latest online environment. Firstly, the methodology’s successive research phases allow for data to be examined from both research and pedagogical angles. Secondly, the decomposition of online environments by their communication modes and modalities offers a systematic approach to studying a range of online learning environments. Thirdly, the open data that LETEC corpora generate are shared via a corpus repository and can be reused by researchers, not necessarily involved in the learning event, to perform cumulative or contrastive analyses. The paper concludes by discussing our current perspectives: the development of pedagogical corpora to train pre-service language teachers out of in-world situations, built upon multimodal materials from global LETEC corpora.

Keywords: learning and teaching corpora (LETEC); data sharing; research data repository; open data; online multimodal interactions

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1. Introduction

The number of online environments language teachers can employ is constantly growing, offering increased potential for L2 interaction analysis. However, research cannot necessarily keep up with technological innovation. One danger is that CALL research will reinvent the wheel each time a new technology emerges. Sharing research situations in formats that allow comparisons between interactions in different online environments will help CALL research better understand L2 interaction across different multimodal environments.
This paper introduces the LEarning and TEaching Corpora (LETEC) methodology, contrasting it with that of learner corpora. We describe the Mulce repository (Mulce-repository, 2013) developed for corpora sharing and suggest ways in which LETEC contribute to sustaining CALL research.

2. LETEC

In the language-learning domain, learner corpora (Granger, 2002; Meunier et al., 2011) are exploited for SLA research. Frequently comprising data from test situations (Reffay et al., 2008) and used in learner-native speaker comparative studies (Boulton et al., 2012), learner corpora focus on learners’ productions and consider neither other course participants (tutors, native speakers, etc.) nor the learning context.

LETEC “collect in a systematic and structured way all the data from interactions that occur during a course that is partially or entirely online” (Chanier & Ciekanski, 2010:§5913). All course participants, productions and interactions are considered. The pedagogical scenario forms an integrated component.

LETEC comprise a XML “manifest” describing its components: the learning design, research protocol, interaction data and participants’ productions (the pedagogical scenario’s instantiation), and licences relating to ethics and access rights (Figure 1).

Figure 1: LETEC components

The notion of LETEC was developed within a French national research project (Mulce-documentation, 2013) and conforms to Chanier & Ciekanski’s criteria (2010) if the term ‘corpus’ is employed (Figure 2).

Figure 2: Facets of a corpus

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13 Authors’ translation.
3. LETEC contributions to sustaining CALL research

3.1. Successive research phases

The LETEC approach to data collection, structuring and analysis comprises successive phases (Figure 3).

Prior to the experiment, research questions are formulated. A pedagogical scenario is elaborated and the conditions under which to conduct the experiment prepared. In parallel, a research protocol is designed. During the online course, data is collected according to this. In the data organisation phase, a process of data display is performed on the pedagogical scenario and research protocol, and data anonymised before being structured into a global LETEC corpus and deposited on the Mulce repository (Mulce-repository, 2013). Structured using an XML schema, interactions from different tools and environments are described in a standardized way. LETEC are described by metadata, allowing researchers to search the repository for corpora according to different criteria (Figure 4).

After the research, data transcription takes place. In the LETEC methodology, transcriptions are characterized by communication modes and modalities. This allows a systematic approach to studying online environments. If new environments present new modalities these are added to the transcription methodology and Mulce metadata,
rather than new methodologies being invented each time new technologies emerge (see Wigham & Chanier, 2013, for an example). The interaction data’s multimodal transcription leads to the production of a distinguished LETEC that includes a particular transformation of a selected part of the global corpus.

Following transcription, data analyses are performed. Data transformations conducted during these (e.g. data annotation or coding) are structured into other distinguished corpora. These do not copy the structured data available in the global corpus upon which the post research was performed, but refer to the latter data and only add the transformed data for the specific analysis.

Distinguished corpora help sustain CALL research by giving value to the researcher’s analyses. The analysed data can be presented in parallel with results and distinguished corpora can be cited in papers/articles. Explicit connections and open access (Open Data, 2012) between data and publications enhance the quality of CALL research with possibilities offered to the community for validity and reliability checks and data reuse.

In a final phase, extracts of LETEC are currently being developed into teacher-training resources. Pedagogical corpora are based on a reflective approach to teacher training and offer the possibility to observe, examine and explore selected parts of a LETEC with reference to a lead that has been identified within the research analyses performed. Reusing research data in pedagogical contexts aids widen CALL research’s applicability.

3.2. Reusability of open data

In online learning situations, the replication of the ecological context is practically impossible to obtain: “collaborative online learning situations have a number of variables difficult to control” (Reffay et al., 2012). If a pedagogical scenario is reused with different participants, the observable phenomenon will not necessarily be the same. Structuring online interactions as LETEC allows researchers, not necessarily involved in the learning event, to reuse the data for further cumulative or contrastive analyses. This is facilitated by the fact that LETEC use a set of documented structured XML formalisms (Reffay et al., 2012) rendering online interaction data autonomous from any platform, in a tool agnostic form. Data longevity is thus increased. The data format can be adapted to become input for annotation tools (lexicometric, multimodal tools (Ciekanski & Chanier, 2008)). Natural Language Processing techniques can also be applied and new annotation layers added (see examples in Mulce-Repository (2013) and explanations in Mulce-Documentation (2013).

LETEC are also being reused in fields other than that of language learning. The CoMéRé project (2013) is gathering CMC corpora (including LETEC) and, within a European context, will propose a TEI extension for CMC communication.

4. Conclusions and Perspectives

After having gathered data from online language learning situations between 2001 and 2011 (the Mulce-repository is still open for new deposits), defined the LETEC structure, and applied it to CALL research purposes, we now face the challenge of developing pedagogical corpora. By “developing” we not only mean defining their structure (i.e. ways of extracting data and linking them to tasks for pre-service language teachers), but integrating them into teacher-training classrooms. Our first pedagogical corpora will be online this summer. Finding a rational path for their integration into teacher training courses, in which, currently, trainers often have recourse to the reading of CALL literature disconnected from actual data and/or participation in online experiments during which their students act as learners or tutors, is another issue.

Training pre-service teachers out of in-world situations, built upon multimodal materials (carefully analysed with respect to theoretical viewpoints) is not simply a concern of the language-learning field. There is extensive experience coming from teacher training in physical education (Roche & Gal-Petitfiaux, 2012). Our interest in pedagogical corpora is thus becoming an inter-disciplinary project.

5. References


Handcrafting video clips to foster audio-visual literacy in the EFL classroom

Eva Wilden
Ruhr-Universität
Bochum, Germany

Abstract

This research paper will illustrate how Handcrafted Video Clips may be used for fostering audio-visual literacy in the EFL classroom. Handcrafting Video Clips is a low-tech creative method for foreign language teaching using ubiquitous mobile media such as smartphones or digital cameras as well as self-made props. Firstly, a brief definition of audio-visual literacy and its relevance for FLT will be given, then a pedagogy of multiliteracies (NLG, 1996) will be discussed. This is followed by a rationale for using mobile media in language education based on two empirical studies regarding (a) the media habits of adolescents in Germany (MPFS, 2011), and (b) the experiences of teachers with mobile media in FLT. The survey results indicate a severe discrepancy between the media habits of today’s pupils and the practice of foreign language teaching. In order to bridge this gap the Handcrafted Video Clip project was conceptualized and implemented in both secondary EFL classrooms as well as foreign language teacher training (Wilden, 2013). After sketching the concept of the project, selected sample video clips will be shown and analyzed in order to illustrate the potential of the Handcrafted Video Clip method for fostering audio-visual literacy as well as training teachers for exploiting mobile media as a creative teaching tool.

Keywords: Audio-visual Literacy; EFL; Mobile Media; Empirical Study; Video Clips; EFL Teacher Training

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1. Introduction

This paper argues that the production of handcrafted video clips facilitates the development of audio-visual literacy, which can be regarded as a key competence in today’s world. In short, audio-visual literacy is the ability to critically read and produce audio-visual media such as film, TV commercials, Vlogs, i.e. media that make use both of the auditory as well as the visual channel. Handcrafted Video Clips are short video clips created with handcrafted props and popular mobile media, such as smartphones or digital cameras. Various authors have suggested the production of Video Clips as a creative method for language teaching (for example: Brickart, Haack & Menzel, 2011). However, this method so far has merely been used as a playful gimmick and its full potential for the development of audio-visual literacy has not yet been fully exploited.
2. Audio-visual literacy

The visual as well as the audio-visual are nowadays part and parcel of pupils’ social customs, communications and media habits. Visuals such as emoticons permeate everyday life and communication and audio-visuals like YouTube or Skype are taken-for-granted elements of the life of ‘digital natives’ (cf. Prensky, 2001), a generation growing up with digital technologies and forms of communication.

The so-called visual turn – as illustrated with these examples – has been widely acknowledged (e.g. Hecke & Surkamp, 2010) and in its wake audio-visual literacy has been proposed as general educational objective tying into a more general multiliteracies approach (e.g. Elsner, 2011; NLG, 1996). Audio-visual literacy is the ability to critically decode audio-visual media and to perceive the fact that the auditory and visual channels consist of successive elements (e.g. various successive shots), and of simultaneous elements (e.g. speech acts and music) and that moreover there is a reciprocal interaction between the two. Learners need to be enabled to understand this complex relationship between content and form in order to be critical ‘digital natives’ when, for example, posting their next Videoblog message.

3. A rationale for using mobile media in foreign language teaching

The 2011 JIM study—an annual representative study researching the information and media habits of German adolescents—has given evidence of the paramount role that mobile media and the internet play in young people’s life in Germany: the teenagers name using mobile phones and the Internet (together with listening to music) as their most important media activities (MPFS, 2011, p. 64). Both boys and girls name shooting photos or video clips as one of the top 6 activities they engage in with their mobile phones daily or several times a week (ibid., p. 60). This active and productive participation of pupils—as so-called ‘produsers’ (Bruns, 2008)—in the multilingual, transcultural online world calls for a pedagogy of multiliteracies (NLG, 1996), developing especially learners’ critical-reflective literacy skills.

However, a survey the author conducted among EFL teacher students (n=204) at a German university indicates that teachers tend to disregard the significance of mobile media in their pupils’ lives and do not make use of mobile media as an educational resource in the English classroom. The results for mobile phones and smartphones—according to the JIM study 2011 the most popular media among pupils in Germany—show that the student teachers have hardly any experiences with mobile media as teaching resources: less than a quarter have heard of mobile phones being used for taking photos or filming videos in foreign language teaching. Less than 7% have experienced mobile phones being used for this purpose when they were pupils themselves. And less than 4% have actually used mobile phones for this purpose in their own foreign language teaching. The vast majority of two thirds did not indicate any prior experiences regarding mobile phones in language teaching, neither as pupils nor as teachers themselves.

Thus the survey results indicate a severe discrepancy between the practice of foreign language teaching and the media habits of today’s pupils. If schools wish to meet the key goal of educating their pupils for active, responsible and critical participation in society, teachers ought to integrate modern digital media in their teaching as pupils need guidance and support to become literate ‘produsers’.

4. Handcrafting video clips—Concept, samples and analysis

In order to fill the gap between teaching practices and learners’ needs regarding mobile media in education, the author conceptualised the initial Handcrafted Video Clip project in order to (a) familiarise EFL student teachers with creative methods for using mobile media in their teaching, and (b) further develop their audio-visual literacy.

Handcrafted Video Clips are short video clips, created with a low-tech approach to filming. No special technical equipment or expertise is necessary (see Figure 1), rather participants use handcrafted props and popular mobile media.
These screenshots (see Figure 2) were taken from a clip called ‘Johanna in the USA’ from the initial Handcrafted Video Clip project in 2011 in which the students had decided to work along the common topic ‘(Funny) Cultural Differences’. The great aesthetic variety of all clips depict the creative potential of the Handcrafted Video Clip method which the participants in all projects so far enthusiastically embraced and exploited.

Figure 2: Screen shots from the video clip ‘Johanna in the USA’

This clip tells the story of a German girl called Johanna during her exchange year at an American high school and focuses on some of the cultural misunderstandings that Johanna encounters during that year. The students used various audio-visual techniques adapted from both filming, cartoons and comic books to present their story, for example zooms, music underlining the story told by the pictures, or visual elements as the dollar sign in the ‘USA’. These and other examples show this method’s potential for a creative, action-oriented and reflective development of audio-visual literacy, thus educating pupils to become active and critical ‘produsers’.

Sample clips are available at: 
http://www.youtube.com/playlist?list=PLYdpi0jMxm63Zrmaw-xQc8YiJUp342Nq

5. Acknowledgements

The author would like to thank all participants of the Handcrafted Video Clip projects for their enthusiasm and hard work.
6. References


Global perspectives on Computer-Assisted Language Learning

Glasgow, 10-13 July 2013

What eye-tracking data can tell us about how learners use automated computer-based feedback to produce revised drafts of essays

Scott Windeatt
Newcastle University
Newcastle upon Tyne, UK

Khaled El Ebyary
Alexandria University
Alexandria, Egypt

Jonny Laing
Newcastle University
(INTO)
Newcastle upon Tyne, UK

Abstract

Software that provides automatic feedback on open-ended writing has been the subject of numerous studies, and the results of our own work using one such system—Criterion—with a variety of students in a number of different contexts suggest that software of this kind encourages learners to produce amended drafts of their essays, and that those amendments generally represent an improvement on the original submission.

Analysis of the submitted essays and the feedback provided on the first drafts suggests, however, that the students use a variety of quite different strategies when making decisions about possible changes. The strategies students use appear to be influenced partly by the confidence they have in the feedback, but also by their interpretation of how marks are awarded by the system. Detailed information is still lacking, however, on exactly what strategies students use, and how they use them.

In this paper we report on a study that used eye-tracking technology to gather data about the revision strategies students employ. Video-recordings of on-screen behaviour using the eye-tracking software provide evidence of what on-screen text students focus on, for how long (fixation time), and in what order, when revising their essays. Analysis of the data suggests that certain categories of error and feedback attracted most of the students’ attention, and that fixation time was not proportional to the number of errors in a particular category.

Keywords: Reflective practice; assessment and feedback; Automatic Writing Evaluation; eye-tracking

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1. Introduction

Writing is usually conceived of as an iterative process involving stages of planning, production, editing and revision, and in the case of English as a Second Language (ESL), revision and editing will often be informed by feedback from peers, teachers, or, increasingly, Automatic Writing Evaluation (AWE) systems. This study involves the use of software—Criterion—based on one such AWE system, and reports specifically on the use of eye-tracking technology to identify which parts of their text learners focus on when producing a revised draft.
There is an assumption that the provision of feedback can improve learning (Black & Wiliam, 1998a, 1998b) and research has focussed on, for example, strategies for providing feedback, the selection of errors that should be commented on, the nature of the feedback that should be provided, and student perceptions of and reactions to feedback. Some argue for feedback on all errors (Higgs & Clifford, 1982), some for selective feedback (Ferris, 2002) and some for no or delayed error correction (Truscott, 1996). Research on student perceptions has generally investigated issues of quality, effectiveness, value, and fairness (Lizzio & Wilson, 2008), while research on reactions has focussed on students’ strategies for using or not using feedback (Huxham, 2007).

In most feedback studies the active role of the students has been emphasized (Winne and Butler 1994) including their role in accepting, modifying or rejecting feedback (Kulhavy, 1977). It is however, claimed (Walker, 2008; Weaver, 2006) that feedback is under-researched, and there is little information about how much attention learners pay to feedback, and how this differs according to the nature of the feedback and the linguistic features on which it is provided. This study is therefore concerned with investigating how feedback affects the parts of a text that learners pay attention to when using feedback to revise an essay draft. The specific question the study sets out to answer is:

- What are EAP students’ preferred reading regions in computer-based feedback on grammar, usage, mechanics, style, and organization and development?

2. Method

The subjects in this study were 16 international students on an English for University Study course. They were preparing to go on to study a variety of subjects at undergraduate and postgraduate level at a UK university, and their level of English was between 5 and 6 on the IELTS test. The students attended a writing class for two hours one afternoon a week for six weeks.

The students were asked to write an essay on four different topics, and feedback was provided for each essay using Criterion, a web-based Automatic Writing Evaluation (AWE) system which provides a holistic score for a piece of writing, as well as feedback on five language areas (grammar, usage, mechanics, style, and organization and development). They were instructed to read the feedback given to them by Criterion and to use it to revise and submit a second draft. The second drafts they produced were also marked by their regular teacher, and analysed to identify what changes they had made and how those changes appeared to relate to the feedback they had received. They were also asked to complete a short questionnaire after each session, and a focus group interview was conducted in week six of the course.

In addition, four members of the group volunteered to write and revise an additional essay using a computer equipped with eye-tracking hardware and software with the aim of identifying what part of the text they focus on when reading on the screen, i.e. their preferred regions of interest within a text that they had received feedback on, and were revising. For this study a Mirametrix S2 eye tracker was used (http://mirametrix.com/products/eye-tracker/). This allows free movement of the head while still providing information about the focus of the user’s gaze with an accuracy of 0.5-1 degree. This provided usable and reasonably accurate information about which part of the text on the screen a student was looking at, and for how long.

3. Discussion

Of the five areas that Criterion provided feedback on (grammar, usage, mechanics, style, and organization and development), for all four participants the main regions of interest were those that had been identified as having errors of grammar or of organisation and development. Irrespective of the number of errors in those two areas, the participants spent most time reading those parts of their text which had been identified as containing those kinds of error (i.e. their fixation time was higher for those parts of the text). The pattern was the same for the second draft, although their fixation time for both grammar and organisation and development was generally higher in first drafts than in the second.

As far as the reasons for this pattern are concerned, it is likely that grammar receives most attention because the students feel that this is a feature of their written work that should and can be corrected where possible. They expect to be given feedback on it, and to understand how to correct their work based on that feedback. Comments on organisation and development, however, may have required more attention because it was more difficult for them to work out how to improve those features of their work. Analysis of the nature of the
feedback provided by *Criterion* suggests that comments on grammar were usually more specific than comments on organisation and development, and the latter appeared harder to interpret.

4. Conclusions

Eye-tracking has proved to be a useful additional tool in analysing the nature of the students’ revision processes, and especially in providing information about the way students allocate their attention when dealing with areas of their text that have been identified as containing errors. Used in conjunction with a range of other sources of data, eye-tracking technology can therefore help provide a richer picture of the students’ revision processes.

5. References


The relationship between auditory vocabulary size, recognition rate and EFL listening comprehension skills

Yutaka Yamauchi
Tokyo International University
Tokyo, Japan

Abstract

Listening comprehension requires learners to auditorily recognize words and understand their meanings quickly using phonological, semantic and syntactic knowledge. How many words they know and how fast they recognize them are thought to be crucial factors for good EFL listeners. In the present study Japanese EFL learners with different proficiency levels measured by the standardized TOEIC (Test of English for International Communication) test were requested to listen to English passages they had never encountered before and answer multiple-choice questions on the gist or main points of the contents. A new network-based test, open to all educators and researchers for free, was developed for this study to measure auditory vocabulary size and recognition rate. The NAELP (Network-based Auditory English Lexical Processing) test required learners to listen to a word through headphones and choose as soon as possible the most suitable meaning of the word out of four options presented on a PC monitor. The option they selected and the reaction time needed for them to choose it (from the time the four options were presented on the screen) were automatically recorded in the computer. Thus NAELP can test auditory vocabulary size and recognition time. The results of the statistical analysis revealed that auditory vocabulary size, recognition rate, EFL listening comprehension scores and overall proficiency scores by TOEIC are highly correlated, and that auditory vocabulary size and recognition time can be important factors in EFL listening comprehension skills.

Keywords: L2 vocabulary; vocabulary test; accuracy; recognition rate; L2 listening comprehension; overall proficiency

1. Introduction

Listening comprehension requires learners to auditorily recognize words and understand their meanings quickly using phonological, semantic and syntactic knowledge. How many words they know and how fast they recognize them are thought to be crucial factors for good EFL listeners. A number of studies have been conducted on the relationship between vocabulary size and listening comprehension skills. Nation (2006) states that 6,000 to 7,000 word-family vocabulary is necessary to cope with and comprehend spoken text. Stahr (2009) finds that vocabulary size and depth of vocabulary knowledge have significant correlation with listening comprehension. However, little research has been done focusing on auditory vocabulary size, recognition rate and EFL listening comprehension skills. The purpose of this study is to develop a network-based test to
measure auditory vocabulary size and recognition rate, check how valid the newly developed test is and investigate the relationship between vocabulary size, recognition rate and EFL listening comprehension skills.

2. Method

2.1. Materials

2.1.1. Proficiency test

TOEIC (Test of English for International Communication), a standardized test consisting of listening and reading comprehension parts, was used to measure proficiency levels of the participants of the present study.

2.1.2. Listening comprehension test

English passages the participants had never encountered before and multiple-choice questions on the gist or main points of the contents were used to measure EFL listening comprehension skills of the participants.

2.1.3. Network-based auditory English lexical processing (NAELP) test

A new network-based test was developed for this study to measure auditory vocabulary size and recognition rate. The NAELP test required learners to listen to a word through headphones and choose as soon as possible the most suitable meaning of the word out of four options in the learner’s mother tongue presented on a PC monitor. The option they selected and the reaction time needed for them to choose it (from the time the four options were presented on the screen) were automatically recorded in the computer. Thus the NAELP test could test auditory vocabulary size and recognition time. The NAELP test contained seven levels of vocabulary in terms of frequency: 500, 1000, 1500, 2000, 3000, 5000 and 10,000 based on the frequency levels of BNC (British National Corpus). The test included six different words in each level and so the total number of words in the NAELP test was 42. The PC automatically chose a word out of the 42 word stock and presented the pronounced word recorded by a native speaker of English to the learner through the headphones. The learner was allowed to listen to the same pronounced word as many times as possible by clicking the play button on the PC screen. The more times the learner listened to the same pronounced word, the longer the recognition rate became. The learner was requested to select one option out of four within 20 seconds. If the learner could not choose one option within 20 seconds, the learner was considered to be unable to answer the target word and then the PC facilitated the learner to move on to the next target word. Whether the option the learner selected was correct or incorrect, no feedback on the result was given to the learner so that the learner could concentrate on listening to the next pronounced word and choosing the most suitable meaning on the PC screen. After the learner finished all 42 word questions, the mean ratio of total correct answers and the total mean recognition rate, along with these same statistics for each of the seven frequency levels, were automatically shown to the learner. Thus the learner could know his or her vocabulary size and recognition rate, and understand which level he or she achieved across the seven levels.

2.2. Subjects

The participants of this study are Japanese EFL learners with different proficiency levels measured by the standardized TOEIC test.

2.3. Procedure

Japanese EFL learners took the standardized TOEIC test and they were classified into three proficiency groups: high, middle and low. The participants took an ESL listening comprehension test. Then they took the new network-based vocabulary (NAELP) test.
2.4. Analysis

2.4.1. Validity of the auditory word test

The validity of the NAELP test was checked by the ratio of correct answers and the recognition rate across seven vocabulary levels in terms of frequency.

2.4.2. Correlation between four variables

The four variables, auditory vocabulary size, recognition rate (both of which were measured by the NAELP test), listening comprehension test scores, and overall proficiency scores by TOEIC were analyzed, and Pearson product-moment correlation coefficients were calculated.

3. Discussion

3.1. Validity of the auditory word test

The ratios of correct answers across seven vocabulary levels in terms of frequency were observed to decrease as the levels of the target words got less frequent. The recognition rates across seven levels were found to be longer as the levels of the target words became less frequent. Those results showed that the more difficult the target word was, the lower the ratio of correct answers got and the longer the recognition rate became, and that this auditory vocabulary test could measure what it tried to test. Therefore the validity of the NAELP test was confirmed.

3.2. Correlation between four variables

The results of the statistical analysis revealed that auditory vocabulary size, recognition rate, EFL listening comprehension scores and overall proficiency scores by TOEIC were highly correlated. Thus auditory vocabulary size and recognition time can be important factors in EFL listening comprehension skills.

4. Conclusions

The auditory vocabulary test newly developed in the present study was considered to be valid by the results of the experiment. The four variables of auditory vocabulary size, recognition rate, EFL listening comprehension scores and overall proficiency scores were found to be highly correlated. Therefore, the NAELP test could be useful in assessing the learner’s auditory processing vocabulary skills and EFL listening comprehension skills. The NAELP test will be demonstrated, and the similarities and differences between auditory and written vocabulary tests will also be discussed in the presentation.

5. References


Effects of online gaming experience on English achievement in an MMORPG learning environment

Jie Chi Yang
Graduate Institute of Network Learning Technology
Jhongli, Taiwan

Hui Fen Hsu
Center for Science and Technology for Learning
Jhongli, Taiwan

Abstract

In order to provide engaging learning experiences for students, recently, there have been a number of studies applying game-based learning supported by technology into English education. Claims have been made that games could increase students’ learning motivation but fail to promote their learning achievement as too much attention has been paid to the game operation or pursuit of game progress. Nevertheless, the relationship between learning effectiveness and the extent of online gaming experience was indeterminate. This study proposes a virtual learning environment by utilizing a massively multiplayer online role-playing game (MMORPG)-based instruction in an English lesson focusing on the learning of vocabulary and sentence patterns. The purpose of this empirical study was to investigate whether individual differences regarding the extent of online gaming experience influenced English language learning outcomes. If so, how did the online gaming experience affect English language learning outcomes? By examining the results of an English comprehension test taken by 55 aged 12 EFL learners, it was found that the online game was effective in assisting English learning. The findings suggest that the modified MMORPG can succeed in promoting English achievement.

Keywords: English language learning; learning effectiveness; massively multiplayer online role-playing game (MMORPG); online gaming experience; young learners

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1. Introduction

Claims have been made that online games could increase learners’ learning motivation, which is the key to succeed in learning a foreign language, and there have been a number of studies applying game-based learning supported by technology into English language learning (Peterson, 2012; Sylvén & Sundqvist, 2012). With its main feature of online interactions with the gaming system and the avatars of other players, enabling collaborative exchanges of thoughts, emotions, and ideas among the game players (Steinkuehler & Duncan, 2012), massively multiplayer online role-playing games (MMORPGs) have been applied into educational environments, particularly in English language learning (Suh, Kim, & Kim, 2010).
Learner characteristics and cognitive learning outcomes have been identified as the key factors in research on the implementation of games in educational settings (Vandercruysse, Vandewaetere, & Clarebout, 2012). Although previous studies have examined the potential of applying MMORPGs into educational settings (Peterson, 2012; Suh, Kim, & Kim, 2010), to date, a small number of in-depth studies, investigating the relationship between prior ability and learner cognitive learning outcomes, are reported in the literature regarding English language learning, leaving this potentially important area only partially explored. This study, therefore, modifies an MMORPG-based game for learning English in a virtual environment. It examines, by learning with the designed English learning multiplayer online role-playing game (ELMORPG), how the learners’ prior ability, naming different levels of online gaming experience, affected learners’ cognitive learning outcomes. The main purpose of this study is to investigate the learning effectiveness of knowledge acquisition after playing the game and to discover whether there are significant differences in the effectiveness of learning with the proposed game between experienced learners and inexperienced learners with regard to online gaming experience.

2. Method

The participants were 55 sixth graders (26 boys and 29 girls) aged 12 on average. The median of the total years that the participants played online games was used to classify the participants. Of the 55 participants, 21 were classified as having online gaming experience, whereas 34 students were classified as having online gaming inexperience.

A new designation ELMORPG was employed. The learning contents are presented with tasks displayed by a non-player character. Questions in the tasks are given with target vocabulary and sentence patterns. Upon success players are rewarded with items encouraging them to continue with the game. If the answer is incorrect, the player receives an instant feedback including answer confirmation and commentary on incorrect answers. After completing all tasks and collecting all items, the player is able to proceed to the next task.

In order to find out the effectiveness of the ELMORPG on learning English vocabulary and sentence patterns, an English achievement test was used to compare between two groups of students with different online gaming experience. The test paper was composed of 25 multiple-choice questions with a total score of 100 given both in the pre-test and post-test for the purpose of comparison.

The experiment of this study took place over a two-week time period. A 90-minute class was given once a week to students for the duration of the study. At the first week, the students took the pre-test, and then a brief tutorial session on the basics of game play was hosted. Subsequently, the students were asked to log on to the ELMORPG and to play the game. At the second week, the students also learned via the ELMORPG. Finally, the students took the post-test evaluating their cognitive learning outcomes. The data collected from the pre-test and post-test were coded for quantitative analyses. Descriptive statistics are analyzed in terms of mean and standard deviation. In order to account for the differences between the experienced and inexperienced online gaming players, a multivariate analysis of variance (MANOVA) was conducted. Results were analyzed for a significant increase in the English achievement test.

3. Discussion

In order to test the learning effectiveness of the ELMORPG, the mean of the results obtained for the pre-test and post-test was first calculated. There was a significant difference (F(1, 51)=19.764, p<.001) in the results of students’ English achievement test, to be exact there was a significant increase in the mean scores from the pre-test (M=57.60, SD=22.896) to the post-test (M=65.16, SD=24.714). The results indicate that the grades of English achievement tests increased dramatically after students used the ELMORPG.

A one-way between-groups multivariate analysis of variance was performed to investigate differences of online gaming experience in achievement tests. The two dependent variables were pre-test and post-test. The independent variable was online gaming experience classified as experienced and inexperienced. There was no significant difference between the two groups of participants with different level of gaming experience on the combined dependent variables: F(2, 52)=2.24, p=.117; Wilks’ Lambda=.92; partial eta squared=.08. When the results for the dependent variables were considered separately, there was still no significant difference. However, the mean score of post-test was increased in both groups. The results indicated that both experienced and inexperienced students’ English learning might be slightly improved regarding the grades of pre-test and post-test.
4. Conclusions

This paper provides empirical evidence in regard to the learning effectiveness of an ELMORPG. Findings of the study carried out with a sample of 55 elementary school students learning English as a foreign language demonstrate that the ELMORPG may be considered to be an effective learning tool for the teaching of vocabulary and sentence patterns. The study also documents that the relationship between students’ prior online gaming experience and their cognitive learning outcomes is little. Although the achievement test grades were increased in the post-test, there was no significant difference while considering the individual factor of prior online gaming experience. This infers that students’ prior ability regarding online gaming experience might not be a significant factor influencing students’ cognitive learning outcomes. The empirical study described in this paper has shown the importance of implementing a virtual learning environment in a classroom setting for English learning. However, given this is a classroom-based study, there are a few limitations. The findings of the present study should be supported with similar analyses applied to larger groups of students in various levels of online gaming experience and compared with the results obtained with groups of students from different academic backgrounds in order to find out whether there are significant differences concerning the learning effectiveness that is shown by the tests performed in this study.

5. Acknowledgements

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6. References


LinguaLeo platform for language learning

Taras Zagibalov
LinguaLeo LLC
Moscow, Russia

Abstract

Internet, the new type of media, gives education a new possibility to develop innovative techniques and methods of language learning. LinguaLeo is an e-learning platform that strives to provide learners and teachers with such new techniques and methods that are based on concepts of autonomous and adaptive learning, individualisation and personalisation. This short paper discusses the approach used in LinguaLeo and briefly presents current and planned implementations of it.

Keywords: e-learning platform; autonomous learning; adaptive learning; personalisation; individualisation.

1. Introduction

E-learning features a number of characteristics that may contradict each other and whose choice depends on certain settings of language learning. One of the best known distinctions is synchronous/asynchronous learning. Synchronous learning is a type of learning where communication between a student and a teacher occurs at the same time; this includes on-line seminars, teaching by video-conference, on-line classes etc. Asynchronous learning takes place when neither teacher nor student needs to communicate in real time: pre-recorded on-line courses, electronic textbooks, learning by correspondence, and so on.

Linear learning is another possible type of e-learning that has its counterpart: non-linear (or adaptive) learning. The first type assumes a step-by-step study of some pre-compiled course. Adaptive learning means free access to different parts of a course according to current progress (or needs) of a learner.

Individual and group coursework may offer different benefits to learners and represent another paradigm of e-learning. The former may be suitable for more personalised approach and the latter offers benefits of socialisation and interaction between students.

Finally, mobile learning (also known as m-learning) and static learning can be regraded as opposite ways of implementing e-learning, both of which have their benefits. For example, m-learning offers much more mobility but is constrained by the limited nature of mobile devices (small screen, short battery life, many distractions etc.), as compared with e-learning by means of more static devices such as PCs and laptop computers. Mobile
devices, however, may bring more to e-learning, not only because they can be used anywhere and at any time, but also by means of added reality, geo-location, photo and video-recording.

All of the aforementioned features of e-learning may be suitable for different people doing different types of language learning and it is difficult to predict all learning needs and their combinations for each potential user: some may need mobile learning while travelling in groups where each member has different level of the language knowledge; somebody else might like to have a classical course of grammar presented to them on the big screen of their home PC.

LinguaLeo believes that e-learning platform can be an effective solution to this problem by providing a flexible choice of characteristics for each course for every individual student or a group of learners.

2. Method

1.1. Principles of LinguaLeo platform

The main principle of the platform that is being built by LinguaLeo is flexibility of methods used for language teaching. The platform itself does not create any learning content but rather offers a technological means for automatic or semi-automatic creation of coursework materials and learning programs.

Other principles include individualisation of learning, even if the learning happens in a group of students. This is important because it is impossible to have exactly the same level of skills and knowledge even in a small group. But even if such a group exists, it is impossible to expect students to learn the language at the same speed using the same method: people have different learning habits and different methods of teaching may suit different people better.

Adaptive learning is a required feature for any course, even if it is a linear course with an obligatory sequence of learning material. As mentioned above, different people have different skills and abilities to learn. But people are influenced by different factors even during a short period of time: people may be distracted, may become tired or even give up learning for a period of time. The system should be able to cope with these factors by adapting its behaviour to the changes in the behaviour of a learner.

Even for individual language learning it is important to be able to communicate with other people in the target language at least because one of the main functions of the language is communication. LinguaLeo offers tools for socialisation to its users through a number of activities, but a user can always keep learning privately if they decide to.

Autonomous learning is required to provide extra flexibility to those learners who may not be able to attend sessions at specific time even if the course is supposed to be synchronous.

1.2. Architecture of LinguaLeo platform

The platform serves a technological medium between teachers and students. It is not just a site where teachers can publish their courses but it is rather an intelligent tool that helps teachers create coursework that will be presented to learners according to the principles of LinguaLeo. The platform automates a number of routine tasks. For example, it may select suitable textual, audio or visual materials that would illustrate a grammar course according to the lexical skills of a learner and their interests. Or given a set of texts (e.g. business letters) the platform would arrange them in suitable order (from the easiest to the most difficult ones), extract new words and offer to learn unknown grammar for each new learner.

It is being implemented by means of building models of all individual contents (texts, tests, exercises etc.), as well as of every learner. The model of content comprises lexical, grammar and meta (length, genre, style, topic, etc.) information about every content. The model of learner contains information about learned items (words, grammar, skills), about learning habits (time, place duration, type of content, etc.), interests and other relevant information about a user. The core component of the platform is a model of teacher, an expert system that, using models of user and models of content, is able to find suitable contents for each learner and build an individual sequence of such contents that form an individual program of language learning.
3. Conclusions

The development of LinguaLeo platform is a work in progress and it exists only as a prototype, but the approach presented in this paper is planned to be implemented soon.
Abstract

This study intends to use a corpus tool to explore the use of academic vocabulary by undergraduate students in writing essays for an English for Academic Purposes course at a Sino-British International University in China. The researchers investigate the development the students achieved based on a corpus of academic written English consisting of 270 students’ essays and reports from this university. The study compares this with another two corpora in the use of academic vocabulary in writing essays: The Corpus of British Academic Written English, including 1,039 British undergraduate and postgraduate students’ assessed assignments from three UK universities, and The Spoken and Written English Corpus of Chinese Learners, with students’ essays ranging from 200 to 800 words from nine universities in China. The findings through WordSmith Tools 5.0 revealed that students made significant progress in the use of academic vocabulary at the Sino-British International University and other Chinese universities. However, some use of informal vocabulary can be found in Chinese students’ assignments. The differences or similarities between Chinese students and students in Britain in their use of academic vocabulary showed in this study can help teachers and students in China and elsewhere enhance their teaching and learning the use of vocabulary in academic writing. Thus, recommendations for the teaching of academic vocabulary are provided.

Keywords: Corpus; English; vocabulary; academic; writing

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1. Introduction

Using appropriate English words in academic writing is a vital skill for EFL learners to achieve at universities. For example, some previous corpus studies have shown that many EFL learners might have obstacles in the use of proper conjunctions in their English academic writings (Granger, 1994; Granger and Tyson, 1996) and regularly use informal expressions (Narita, Sato & Sugiiura, 2004). Hence, it is crucial to teach EFL learners to use academic vocabulary including conjunctions efficiently in their formal writing.
attend English for Academic Purposes (EAP) lessons in years one and two at the Language Centre at XJTLU. Using appropriate academic vocabulary in writing essays, reports and dissertations is one of the key skills that students should acquire. However, there is a lack of studies examining students’ use of academic vocabulary in their English writing at this Sino-British University. Therefore, this research attempts to discover students’ development of their use of academic vocabulary via a corpus tool.

Studies have revealed that corpus can help develop students’ language skills via learner corpus and web concordance (Granger et al, 2007). Language teachers can apply corpus to reinforce classroom teaching and vocabulary teaching with various corpora (He, 2004). Therefore, this study used three learner corpora to investigate the frequency of the use of academic vocabulary among three groups of students. The WordSmith Tools 5.0 (Scott, 2010) will be used to analyse the data. This study was guided by research questions as follows:

1. Have students at the Sino-British University made progress in their use of academic vocabulary?
2. What are the similarities and differences in the use of academic vocabulary among Chinese students and British students based on the three corpora?

2. Method

The first learner corpus, the Xi’an Jiaotong-Liverpool University Written English Corpus (XWEC), consisted of 270 students’ essays and reports with words from 300 to 1,500 in Year One. The corpus contains more than 1,000 examples of students’ work in more than 10 genre families from 8 disciplines at the university. The total number of words is 1.2 million.

The second learner corpus, the Corpus of British Academic Written English (BAWE: Nesi, Gardner, Thompson and Wickens, 2007), comprised 1,039 British undergraduate and postgraduate students’ assessed assignments from three universities in the UK (Nesi, Heuboeck & Holmes, 2007). BAWE included 35 disciplines with words from 800 to 1,500 per essay. There are 13 genre families with more than 3,000 examples and 6.5 million tokens (Nesi, Heuboeck & Holmes, 2007). The main authors of these essays are native English speakers and all these assignments are with scores of above 60 (Alsop and Nesi, 2009). Therefore, the level of these assignments could be considered as of high standard.

The third learner corpus, the Spoken and Written English Corpus of Chinese Learners (SWECCCL 1.0, Wen, Wang & Liang, 2009), contains students’ assignments ranging from 200 to 800 words from nine universities in Mainland China, with over 3,000 examples of essays in 16 genre families and all the students are English majors from years one to four. The total number of tokens in SWECCCL 1.0 is approximately 1.2 million (Wen, Wang & Liang, 2009).

3. Discussion

The results show that the students from the Sino-British University have improved in several ways in their use of academic vocabulary, including conjunctions, in their academic writing after one year at the university. The statistical data and Chi-Square tests reveal positive results to prove the progress that students made at the Sino-British University. Despite this, there is still weak usage of some conjunctions that needs improvement, compared with students at the three British universities. Students from other Chinese universities have also made some progress. However, as a result of the strong influences of oral English, Chinese culture and EFL teaching strategies in China, students in other Chinese universities appear to use more informal words, including conjunctions, than students in Britain and at the Sino-British University. This is probably because many Chinese students may be unaware of the differences between formal and informal words in an academic context, bearing similarities to other EFL learners. Meanwhile, some informal words, including informal conjunctions, are overused because Chinese students might be overly familiar with them. It is suggested that some adjustment might be taken into consideration in EAP teaching by EFL teachers in China in the future. It would be beneficial to remedy inappropriate over- or under-use of academic vocabulary in students’ academic writing.

4. Conclusions

The findings indicate that students in the Sino-British University have made progress and performed better than the nine universities in China in the use of academic vocabulary due to the fact that the English course in the Sino-British University complies with the standards of British universities. It is expected that the findings in this study can help EFL teachers to reconsider their teaching of academic vocabulary. Positive results in learners’
use of academic vocabulary can be sustained, but inappropriate use of academic vocabulary should be corrected in academic English teaching contexts. Furthermore, it is expected that this research can assist EFL learners in using formal words properly in their academic writings. Nonetheless, there are several limitations in this research. Limited students and samples were involved in the corpus of XWEC at the Sino-British University, compared with the other two corpora, which may have an impact on the findings.

5. References


