〈Research Report〉

An Analysis of the Development of an Online Language Learning Program

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Literature Review

While computer-assisted language learning (CALL) has been around since the 1960s, it wasn't until the mid-1990's with the emergence of the Internet that online language learning (OLL) became a viable option for language learning and teaching (Lamy & Hampel, 2007). Existing under an umbrella of terminology (e.g. E-learning, blended learning, distance learning), there is no absolute definition of what OLL is. Blake (2011) presents three formats that are indicative of an OLL environment. In each of the formats, there is some use of content delivery via online resources:

- A Web-facilitated class- less than 30% of content delivered online.
- A blended or hybrid course- equal amount of content delivered online and face-to-face.
- A fully virtual or online course- all content delivered online.

In its early years, most of the literature on OLL tended to focus on what defined it and the implications for its theoretical foundations (see Collins, 1990; Keegan, 1990; Lewis, Whitaker, and Julian, 1995). As it has become more widely respected as a means of delivering and receiving content, the spectrum of OLL research has steadily expanded. In her article looking at the development of OLL research, White (2006) presents the (then) current state/focus of research. She notes that in just over a decade after the emergence of the Internet, studies of OLL were moving away from theoretical toward more pedagogical interests. In her analysis, she finds that the issues of course development, course evaluation, teaching roles, and learner support were prevalent among the research being done at that time.

Course development

Technology should function to facilitate instruction both in and out of the classroom (Chapelle, 2010). For this to occur, courses need to be designed in a way that allows for both the teacher and learner to effectively use the decided upon technology. Of great importance is the necessity for quality interaction

between teachers and students (Jaggars and Zu, 2016). Putting students in an "untraditional" learning environment and asking them to use technology that they are unfamiliar with might create barriers to effective learning, so strategies should be implemented to reduce those barriers. Designing a course to use strategies such as the use of basic technology and feedback is viewed as helpful. A study by Lowenthal and Dunlap (2011), found that students viewed simple e-mail communications and feedback as being more helpful than more sophisticated social networking platforms. Hodges and Cowen (2012) further suggest that any online-based course must employ sufficient communication between teachers and students that is both timely and clear.

Course evaluation

Even though Internet and web-based learning platforms are used by millions of people around the world, there remains a stigma that such learning is "inferior, unproven, and limited in application relative to traditional classroom instruction."(Sener, 2004, p. 1) One possible reason for this could be in the way such courses are evaluated. Since OLL courses differ in the way material is presented and received, it does not make sense to evaluate them the same as one that takes place in a "traditional" classroom environment. Of course, deciding whether or not a course is successful or not depends on several variables (e.g. course goals, teacher's approach, individual differences among the students, etc.). In OLL courses, there are additional factors which must be taken into consideration where evaluation is concerned. Formative course evaluation, where evaluation is ongoing throughout the course, was first applied to an online/distance learning French program at the Open University in the United Kingdom. In their seminal study, Crooks and Lamy (1995) present the stages of design, research, and revision that go into the formative evaluation of a French distance learning program. The goal of the process is to get student opinions about aspects of a course and evaluate design features based on student responses. This formative process has since become the norm for most current research.

Teaching roles

As with evaluation, the roles of the teacher in online courses differ from their face-to-face counterpart (White, 2006). In its first ten years, research into OLL does not offer much in the way the teacher functions within the program. Since that time, however, there has been closer examination regarding teaching activities. Abras and Sunshine (2008) promote the development of three skills which, when applied to teacher training, encompass the spectrum of teaching duties from course design to methodology to L2 learning theory:

a) *Technology in online language teaching*: Kessler (2006) notes that technological training of teachers focuses primarily on overall literacy and navigation of specific computer programs and software, but little on how to apply them to L2 theory. Other studies (Abras and Sunshine, 2008; Hubbard, 2008) corroborate this, adding that teachers are ill-prepared to apply technology to language teaching. However, more recent literature (Son and Windeatt, 2017; Baralt and Morcillo, 2017; Hockly, 2015) shows that teachers are being given more training in basic technological skills.

b) *Pedagogy of online language teaching*: If teachers wish to become truly proficient in OLL, then they must develop the ability to apply language learning theory to such courses and establish competent social communities via online platforms (Abras and Sunshine, 2008). As Colpaert (2006) states:

> Teachers should become designers: designers of what they need as a pre-use evaluation mechanism and designers in development as a new way of bridging the gap between technology and pedagogy. However, most important, teachers can and should become contributors in CALL research, provided they work in a research-based research-oriented approach. (p. 494)

c) *Evaluation of online language teaching*: Chapelle (2001) stresses the importance of a good knowledge of what CALL resources are available and how best to use those resources for L2 instruction. If teachers are to competently evaluate the quality of an OLL course, then they need to establish a framework from which to base the evaluation. A continuous cycle of "action, reflection, and improvement" (Wang, Chen, and Levy, 2010, p. 291) is necessary throughout a teacher's training and subsequent teaching in order to make well-informed and prudent evaluations.

Learner support

Due to the open and often unsupervised nature of OLL courses, it is important for teachers to support their students and help them to develop the skills that will lead to autonomous learning, thereby decreasing the instances of failure within such programs (Ribbe and Bezanilla, 2013). Teachers would therefore be wise to take steps to ensure that students are given ample support to realize their roles in the learning process. As Smith (2008) states, "the notion that learners have the power and right to learn for themselves is seen by many proponents as a fundamental tenet." (p. 2).

But this "power" comes at the expense of having the teacher removed from much of the equation. To compensate, teachers and designers are encouraged to take measures which will compensate for the lack of traditional classroom structure. Luzón (2006) posits that in order to give students the proper support, teachers need to actively engage and work with learners on several fronts:

> Providing the appropriate support for learners involves: a) helping learners plan their learning, set their own goals, and manage the materials; b) setting tasks that raise learners' awareness of language and of language learning; c) incorporating tools for self-assessment and reflection and for social interaction. (p. 113)

By engaging in the above activities, the writer feels that students would be more inclined and comfortable to take a more active and accountable role in their learning.

The use of feedback can not only lead to autonomous learning, but also promotes individualized learning, allowing students to focus on their weaknesses (Bangs, 2003). In addition, feedback offers the potential benefit of resulting in reduced learner anxiety. In a study by Martin and Valdivia (2017), students who were reported as suffering from high levels of anxiety during synchronous online interaction reported that corrective feedback from the teacher was more effective in reducing their anxiety than other feedback sources. The writers concluded that if feedback could help reduce anxiety, learners would stand a better chance of succeeding in their online courses.

As technology continues to improve and new ways are found in which to apply L2 learning theory to the area of CALL, there is sure to be an increase in interest regarding how we can best create effective and efficient OLL courses. It is therefore crucial that we develop a clear understanding of the factors that influence the development and employment of OLL.

Conception

The online language learning program being discussed in this article was implemented at a private university in Japan. Students enrolled in the courses were primarily first- and second-year students. Courses within the program mainly consisted of four skills courses focusing on basic grammar and vocabulary, oral communication, reading and writing, and TOEIC test preparation courses. All of these language courses were organized and implemented through The Center for Language Education (CLE). This entity is responsible for the development and implementation of language courses for all departments at the university.

The program was first conceived to address the sudden restrictions put into place when the spread of the COVID-19 virus made on-campus classes infeasible. After delaying the beginning of the semester, the university made the decision to have the semester be done entirely online due to the combination of the virus' highly infectious nature in addition to its mortality rate. Most students were not allowed to enter campus and even faculty and staff were asked to only come in for essential work. The implementation of the curriculum that was originally created would no longer function and now needed to be replaced with an online language learning program in order for the semester to proceed.

Goals

The use of technology in the classroom has led to a re-examination of both teaching and learning (Egbert, 2007). Unfortunately, the urgent nature at hand required a more basic and primary goal: take the curriculum for language courses that were originally planned to be done in a traditional classroom setting, and alter them in a way that students could still study the same course material online. Students needed to be able to complete the work in the original curriculum through an online course that did not require students to come to campus. In addition, the well being of faculty and staff also had to be taken into consideration and a curriculum needed to be developed that would allow for the program to be managed throughout the semester with instructors spending minimal time on campus.

A secondary goal of creating the online program was to make improvements to the technological aspect of education at the university that would carry over when regular classes resumed. This meant taking a closer look at the university's current learning management system (LMS) and the technology available to both students and instructors. Developmental progress in technology-based LMSs has led to an increase in their use in higher learning (McGill and Klobas, 2009), but until the beginning of the semester, much of CLE's current curriculum was entirely paper based. Making a transition to digital files and the use of file sharing technology held the potential for several merits. Beyond the obvious benefit of being more ecological by using less paper, students and instructors would have better access to information which could be shared outside of classroom time. Access to media beyond written text and pictures could also enrich the curriculum. Providing access to on-demand video and audio content, in addition to online resources, could further aid in creating a more engaging curriculum. This would also allow students to more actively engage in course content at their leisure outside of regular class hours.

Limitations

The first and most difficult limitation to overcome was the need to do all course work without students being required to come to campus. In addition, because instructors were also instructed to work from

home whenever possible, the courses had to be implemented in a way that kept instructor presence on campus to a minimum as well. This meant creating a curriculum at the beginning of the semester that would require little communication between instructors. This posed a unique challenge in some cases, as several of the courses were taught by two different instructors. In previous semesters, students would attend a course twice a week, for fifteen weeks. In each week of a shared class, one of the two instructors would each be responsible for instructing the class one of the two days a week. Instructors in these shared classes would be in close communication throughout the semester. Some of the main aspects of this communication were exchanging work done by students, following up on students who were absent or missing work in the other class, coordinating testing schedules and adjusting test items based on material covered in class, and discussing what was done in each class to ensure that content was not skipped or repeated outside of review. Before, this was possible with instructors being able to meet and hand off materials and consult each other regularly in person. Completing these tasks through online resources would mean having to simplify and streamline the way this information was shared. Knowing that learner dissatisfaction could result from the physical separation between teachers and students (Stracke, 2007), there was concerted effort to stress the importance of feedback and quality of materials offered to students.

The second major obstacle was technology. All instructors had Internet access and computers to make use of online resources. Due to the nature of the job, most instructors also had ample experience with common tools such as word processing, file authoring software, file sharing applications, and email accounts. This, however, did not mean that their technological experience was sufficient for the new program. As Easton's (2003) study suggests, teachers could not simply transfer their classroom skills to a distance learning program. They needed to shift their thinking paradigms to reflect the change in information presentation. Many found themselves at a loss when it came to effectively reaching the students. For students, the technological aspects of the program were at the forefront. To make an online course feasible, all students would need access to a computer or smart phone with Internet access on a regular basis. They would also need to have at least a basic understanding of fundamental computer use, such as how to use an internet browser, create documents, send email with attachments, and access files online. In many cases, students had very limited knowledge of these tasks and would require training. This would especially be the case if an online curriculum required anything more than these basic tasks. In other cases students simply did not have access to the technology needed for online classes. The technological requirements for these classes would need to be kept to a minimum. This ruled out any sort of curriculum that would rely on high speed internet, and use of large files that would be difficult to manage outside of email attachments. Overall bandwidth use also had to be considered as many students would be using their smartphones which are often capped monthly after a certain amount of data has been used.

In addition to the issue of access to technology, another limitation unique to the situation of holding classes during a pandemic was student access to textbooks. Publishing companies were also combating the problems created by the pandemic, the most relevant of which was disturbances to their supply chains due to shipping restrictions. Many of the textbooks originally planned for use in the semester were imported from outside the country. Due to shipping restrictions and delays, students would not be able to purchase the books they needed in time for the beginning of the semester. Several publishers refused to allow the use of digital copies of ordered textbooks for fear of illegal sharing. Others allowed only limited access to digital copies that only consisted of a small portion of the full text.

One final limitation that proved to be critical was a lack of time to prepare the new curriculum. Proper faculty training is important if such a program is to be implemented (McKenzie, Mims, Bennett, and Waugh (2000). The beginning of classes in the semester had been delayed three weeks and it was announced only then that classes would resume online. This left very little time to mobilize the CLE faculty and staff to develop the new curriculum and address the limitations expressed above. In addition, many faculty members were reluctant to come on campus due to the declaration of a national emergency. Non-essential employees across the prefecture were encouraged by the Japanese government to work from home whenever possible. This only served to further compound the situation, making the timely development of a new curriculum even more difficult, raising ethical issues as to what instructors could be asked to come into campus for weighed against the risk of infection.

Implementation

The responsibility for developing this new online language learning curriculum fell to the full-time language instructors, under the direction of the director of the CLE. After looking into the LMS that was in place, it became apparent that it would not be sufficient as a stand-alone option. While it had been used in the past for recording attendance for students and submitting final grades, file sharing and e-mail correspondence through the LMS were inadequate. Implementing an entirely new LMS that could handle the demands of an online course was also not an option. Cost and training are often deal breakers when it comes to incorporating an LMS into an OLL (Wang, Woo, Quek, Yang, and Liu, 2012). Getting a new LMS approved, funded, and licensed through the bureaucracy of an already overloaded university system due to COVID-19 would take time. Even if this was possible, additional time would then be required to train instructors on its use. Having instructors simply use their university e-mail for all classes and file sharing would also be impractical. Because each full-time instructor typically teaches at least 10 classes per week, having students from numerous classes sending everything to a single email would prove problematic. It would be too time consuming to sift through an inbox every week to find students and identify which class they belonged to.

It was decided that the best option available was for each instructor to create several different email accounts using Gmail, each corresponding to a class they were teaching. This way email from each class would be organized and contained within its corresponding email address. Instructors could create a separate mailing list for each account that would make contacting the entire class easier, as well as making email review more manageable. Students would be given the email address for each class, and asked to use the email they registered with the university when sending mail to their instructor. By registering these student email addresses in the contact list, an instructor could simply look for mail from a specific student by inputting the address on file.

Using these Gmail addresses would serve as the primary method for instructors to correspond with students, as well as share digital handouts and collect completed work from students. In addition, because most instructors already had experience using Gmail, very little training was required in its implementation. Instructors were asked to create these email accounts for their courses and to create a shared email account for shared classes. This way either instructor could check in on the account to receive assignments and email for the class they were responsible for. Instructors were also asked to use the course identification number in the address created for each course to make organizing information easier. This would also help students to keep track of which email address corresponded to their class.

In the implementation of the course work, the CLE took an approach combining the aspects of a hybrid course with a distance learning course. While a true hybrid course combines face to face classes with on-demand course work (Blake, 2011), this modified version replaced face to face classes with a real-time lecture using Webex, a video conferencing platform. This is the video conferencing software that the university adopted to use for all online programs and training was given to students before the semester began to minimize technical difficulties. Although its use does have limitations compared to a regular face to face class, it was decided that providing students with some real-time interaction with instructors in a way that emulated normal class would give them a better connection to both the instructors and their peers and may decrease anxiety. For other content courses in other departments, classes were held almost exclusively through Webex twice a week. For English classes however, instructors felt that using solely online lectures was inadequate in teaching English courses, particularly because of the communicative nature of a language course. Those in the CLE felt that the need for student output required something to supplement lectures. To this end, online lectures were held regularly once a week. These lectures were supplemented with on-demand materials that students could access in between the weekly lectures.

On-demand content was provided in several ways. First, through an agreement with publishers, students had access to digital versions of textbook materials in the beginning of the semester to use until textbooks became available. Students were provided with these materials on a regular basis through links provided to them through their classes' respective Gmail accounts. Students were also given a

schedule outlining the topics, textbook pages covered, assignments, and due dates for each module of the textbook. This provided structure and consistency to the students, allowing them to better anticipate what was being asked of them in the coming weeks. These schedules were provided in both English and Japanese. Students were also provided links to audio recordings they would need to complete several assignments, as well as links to videos on YouTube, which were created to provide explanations of content and explicit instructions on what needed to be done for weekly assignments.

Workflow in the class followed a regular pattern throughout the semester. Instructors would explain new material in lectures. Students would then complete the assignment for that week and submit it to the Gmail account for their course before the next lecture. After reviewing the students' work, the instructor would go over the previous assignment in the following lecture and then introduce new material for the next week. Instructors would also take time during the Webex meeting to have conversations with students and answer any questions they may have. During the week, instructors were also expected to check their Gmail regularly to address questions or concerns their students may have.

Work submission was done digitally for all assignments. To minimize the risk of plagiarism, students were in most cases asked to complete assignments by hand and submit either a scan or photograph of their work. Students had the option of either printing out pages and filling in the answers, or writing the items in the assignment by hand in addition to their answers. Students were then asked to send the digital copy of their work to the Gmail address assigned to the course they were enrolled in. These digital files were then reviewed by their instructor. The exception to this were the final reports for each class, which were completed in a similar fashion, but submitted digitally through the university's LMS rather than to their class Gmail account.

Feedback for students was handled in several ways. Guided by the same mindset as Bangs (2003) and Martin and Valdivia (2017), formative feedback was given continuously via email and through online lectures. Each week's assignments were reviewed during the weekly lectures and common mistakes from the homework were addressed. Students were free to ask questions related to their work during these sessions as well as through email. Summative feedback was also given at the end of the semester in the form of a final grade for the course. This final grade was calculated by taking into account the students' weekly assignments and a final report that was submitted at the end of the semester. Attendance at Webex meetings did not count toward student grades. However, submission of weekly assignments was used as proof of attendance and students were required to submit at least two thirds of the course work to receive a passing grade.

Evaluation

Evaluation of the program was based on feedback from students throughout the semester, the experiences of the authors, and comments made by their colleagues who also taught the online language courses. Evaluation was ongoing throughout the semester and while several minor aspects of the course's implementation were altered to better facilitate the transition to online courses, the main principles mentioned above in the implementation of the course remained the same.

At the center of the course, one of the most glaring issues with the semester was using Gmail for learner support and assignment submission. Immediately there were several problems. In some cases, instructors were limited to the number of Gmail accounts they were able to create due to a limit set by Google. Other instructors needed to use different people's phone numbers to register an adequate amount of addresses with Google to use for each class. A second issue came with instructors who were sharing a class, and therefore sharing an email. Due to the large quantity of emails, it became difficult to keep track of which emails were read by whom. In addition, following up on questions also became difficult. Oftentimes, when a student emailed a question, a sharing teacher may have opened it but not replied. The other teacher would then see it as read and think the question was addressed and not open it.

While compartmentalizing each class with its own email did help, the number of emails for each class was still difficult to manage. Instructors often complained about it taking more time trying to navigate through Gmail than it did to actually write to students, and provide feedback. There was also an issue with students not following directions. Some students would send email to their instructor's university address rather than the Gmail address they were given. Others wrote from an email address other than the one they had registered with the school. In this case, when an instructor searched for email from the student in Gmail, they wouldn't receive any results. Students would also have similar questions throughout the semester and instructors would receive and need to respond to multiple emails to answer those questions.

Another problem that arose was issues with assignment submission. Students were originally asked to write their assignments by hand, take a picture, and then send it to the class Gmail address. This however resulted in several issues. Sometimes students would take low quality pictures of their assignments. In many of these cases the instructor was unable to read the assignment and had to contact the student to receive a legible copy. In other cases students tried to attach multiple, high resolution photos to one email. They were unable to send it due to the file size of the attachment being too large. As the semester continued, instructors suggested workarounds for this problem such as compressing files or placing multiple pictures in a Word Document or PDF. Even then, however, this remained a prevalent issue for instructors up to the end of the semester.

Workflow and online lectures via the Webex video conferencing application were executed with only

a few minor issues. Student feedback indicated a positive impression of the decision to have one lecture and one on-demand class per week in place of the traditional two lectures a week. Having a uniform structure to the workflow throughout the semester resulted in a dramatic decrease in questions from students regarding what assignments they were required to do for each week. Video conferencing also requires high bandwidth, which was an issue for many students using smartphones. Being able to limit these video conference sessions to once a week helped to alleviate this. There were few issues with both students and instructors being able to use the Webex software regularly. The main issue that was noted was that it became difficult to ensure the participants were actively listening to lectures, and not simply joining the meeting and then putting their phones away or walking away from their computers. Another issue with Webex was that at the time of its use, the software did not support break out rooms for students to split up into separate groups and participate in group work with the instructor acting as a monitor. Due to the nature of the medium, online conferences were limited to mirroring the style of a traditional lecture. For example, students received mostly input from the instructor.

While implementing feedback primarily through Gmail served its purpose, there were some major problems involving the amount of time required by instructors to use this method effectively. Correcting assignments that were submitted by students was extremely time consuming, particularly when it came to making corrections in long writing assignments. In a traditional class the instructor would simply do this by marking on the paper and returning it to the student. Doing this digitally proved to be a challenge for several reasons. The first obstacle was ensuring students submitted the assignment properly. As mentioned above regarding email use, assignments were often sent either to or from the wrong address. This made locating assignments difficult. Students also sent their assignments using a variety of file types. This made it difficult to use one effective strategy. Instead, instructors needed to find workarounds for different types of files. The major issue with this was the amount of time required. From locating the file and putting it into an editable format, writing revisions and preparing the file to be sent to the student, to then creating an email to send back to the student, the time spent on a single student's feedback was exponentially longer than the traditional method. Many instructors cited this as one of the biggest issues with the online program, requesting an easier way of providing feedback. Students also expressed frustration with not receiving replies to their emails in a timely fashion. With a full-time instructor teaching an average of 10 classes a week, the large number of inquiries from students made it difficult to respond. These inquiries in combination with grading the digital assignments, holding weekly video lectures, and providing feedback, required instructors to make an unrealistic weekly time commitment beyond the traditional working hours set by the university.

Based on the conclusions drawn in evaluation of the first semester of the online language program, several changes are being made to improve the program in the next semester. The biggest issues were mainly problems with email, assignment submission, and providing feedback. These issues all stemmed

from the lack of a capable LMS that could have all of these aspects of the program integrated into it. In the coming semester the CLE plans to use the Manaba LMS, which appears to satisfy the needs for the CLE to streamline the program, help instructors with previous time management issues, and increase their effectiveness in managing several courses at once. Submissions by students will be done through the LMS. Many assignments can be autocorrected and returned to students by the instructor simply inputting the assignment and the correct answers. Writing assignments can also be checked and returned through the LMS, removing the need to use email for submissions. In addition, while inquiries by students can still be sent to instructors via email or the LMS, there will be a forum open for each course that students can use to consult with their peers and provide support for each other as a supplement. Plans to switch from Webex to Zoom have also been made. Many students have said they prefer the Zoom platform due to its user friendly interface and its prevalent use by others both in and out of class. Break out rooms in Zoom also make it possible to create more communicative classes where students can work in groups and have more opportunities to communicate with each other. The CLE looks forward to implementing these changes and evaluating their effectiveness in creating an efficient online language program.

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