Shared Identities: Our Interweaving Threads

Virtual language labs: A four year curriculum and implementation process

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Language labs utilizing cutting edge technology can provide real world language learning environments with adequate support and engaging content. Virtual Language Learning has arrived. Is virtual world language learning feasible or even worthwhile? If so, how would one go about it? This paper will describe the results of a year-long study on ways to effectively use web based technology such as wikis, social networking, and virtual worlds to provide Japanese university students with more opportunities to practice speaking English both in and out of the classroom. Finally, a step by step process for implementing a virtual language lab as it relates to the curriculum model will be presented.

最先端の技術を取り入れた語学実習教室ならば、魅力的な内容と適切なサポートを備えた現実的語学学習環境を提供することが可能である。仮想世界を利用した言語学習が可能であり、また価値があるとしたならば、どの様に取り組んでいけば良いか、この論文で論ずる。ウィキやソーシャルネットワーキング、仮想世界などを如何に効率良く利用し、日本の大学生に教室の内外で英語を実践的に話すより多くの機会を提供できるかについての1年に亘る研究結果を示す。最後には、カリキュラムモデルにも関連する、仮想の語学実習教室を実行していくにあたってのステップ毎のプロセスも提示する。

The purpose of this study is to observe how technology can be used to increase speaking time with native English speakers through the use of web based technologies including web conferencing and virtual worlds. This paper is presented in three sections. The first section attempts to provide a background into the hypothesis that social interaction within a web-based curriculum can facilitate highly efficient language learning. The curriculum analysis section then goes on to explain the results of research undergone which supports current trends in communicative learning as it relates to web and virtual world technology. Finally, the implementation section provides a step by step model for integrating such

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technology into a language program which could work in tandem with the model presented.

Background

The author hypothesizes that although task-based learning and combinations of cooperative and collaborative techniques are proving successful, English teachers in Japan continue to have difficulty finding ways to motivate and engage learners to speak more. Second Language Acquisition theorist Krashen (1981) states:

> What theory implies, quite simply, is that language acquisition, first or second, occurs when comprehension of real messages occurs…. The best methods are therefore those that supply "comprehensible input" in low anxiety situations, containing messages that students really want to hear. (pp. 6-7)

Providing these environments in the traditional classroom is of course possible, as is comprehensible input and interesting content, but how long can we keep their attention without turning education into "edutainment"? Maybe we need something new. In an article regarding the 1840's introduction of the blackboard, Lewis (1988) writes:

> Remarkable new technology is introduced into the school system and experts predict education will be revolutionized. The technology will, as never before, allow the widespread dissemination of new concepts and ideas that stimulate young minds and free the teacher for more creative pursuits. Yet, the magic fails to materialize, and within a few years articles appear in the popular press asserting that the failure, obviously arises from the teachers not being skilled enough in the new technology.

Obviously the introduction of the blackboard proved successful in gaining the attention of students. Also, it required teachers to learn how to help students visualize the material in a different way, but the tool was simple, chalk and a board. Today these tools are far more complex. However, it is the teacher who is responsible for learning these tools. This puts the burden of responsibility on the shoulders of teachers which lessens the likelihood, possibly, of even taking the first steps. Thus, the importance of this research is best summarized by Hill, Wiley, Nelson, and Han (2004) as follows:

> As we continue to implement and examine the use of the Internet in our learning environments, the factors contributing to their successful implementation will become clearer. Taking the next steps toward the creation of active learning environments using the Internet is just a matter of choice; choosing not to take these next steps will leave the technologies like many other educational technologies before them: great ideas whose true potential was never realized. (pp. 454-455)

As our students become more and more familiar with the use of cell phones and web-based social interaction, there is no doubt we must answer to their needs in ways that tie in to their learning. The present study intends to provide a base for discussion into the development of a four-year technology-based language learning curriculum which gradually introduces students to web-based language learning.

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It is the author's belief that the single biggest problem for Japanese university English students is the inability to actively practice using the target language. Classroom speaking time is limited and out-of-classroom study time is subject to individual study usually resulting in reading or writing only. Few students have enough money to pay for English lessons outside of school. By having a Skype or a virtual world language lab on campus, students can connect via voice and/or video with English speakers from around the world. Additionally, these labs provide a very good support-environment for students, freely available and flexible for students' schedules. Best of all, they are inexpensive to install and maintain for the school.

During the 2008 school year, research was conducted at Mukogawa Women's University to develop a better understanding of this concept as well as how technology can help students connect with native speakers while increasing speaking time. One hundred first- to third-year university English majors in classes were introduced to various types of web-based software including Facebook, Skype, and Second Life in an attempt to measure how well they acclimated to the technology, what their level of motivation was as a result of this, and what learning theories worked best at which stages and levels. The author presented all students with similar material in order to discover the scope between different years. The result of the research found that four distinct areas exist, each correlating to the student grade level.

To understand the progression of students learning utilizing technology, an understanding of lower order thinking skills (LOTS hereafter) and higher order thinking skills (HOTS hereafter) as it relates to learning objectives should be considered. Bloom (1956) developed a model to explain how people learn. His taxonomy of learning was broken down into categories: Cognitive (processing), Affective (feeling), and Psychomotor (doing). He further broke this down into an order of thinking which can be translated into how our students process language learning from early stages onwards; LOTS and HOTS, as shown in Table 1. Over the years these have been revised to accommodate present learning theories and practices. One such revision by Anderson and Kratwohl (2001), referred to as Bloom's Digital Taxonomy, addresses the field of technology usage and learning (See Table 2).

Table 1. Bloom's Taxonomy (1956)

Higher Order Thinking Skills (HOTS)	
	Creating
	Evaluating
	Analyzing
	Applying
	Understanding
	Remembering
Lower Order Thinking Skills (LOTS)	

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Table 2. Bloom's Digital Taxonomy (Anderson & Kratwohl, 2001)

Higher Order Thinking Skills (HOTS)		
	Creating	Collaborating Moderating Negotiating Debating Commenting Net meeting
	Evaluating	Skyping Video conferencing
	Analyzing	Reviewing Questioning
	Applying	Replying Posting & blogging
	Understanding	Networking Contributing
	Remembering	Chatting e-mailing Twittering/Microblogging Instant messaging Texting
Lower Order Thinking Skills (LOTS)		

Curriculum analysis

In order to address these levels of thinking in terms of how our students acquire languages, the author tried to combine various learning theories that would most efficiently expedite learning. Based on the qualitative and quantitative feedback from the 100 students who partook in the study, we observed a substantial increase in student participation and interest in using English to communicate compared to traditional textbook methods. 75% of the students enjoyed using technology in the classroom. A further 98% of them felt video conferencing and virtual worlds significantly helped them learn to use English more confidently. We then found that task-based supported learning activities fell into convincing categories as listed below in what has been called, the Web Tech Learning Model (Table 3). These findings further support the importance of task-based supported learning, cooperative learning, collaborative learning, interactive learning, and problem solving.

The following explanations pull these theories together to give a better understanding of how we can build a four-year curriculum using technology as a tool for higher level communication ability.

First year

In Japan, first-year students enter college having studied English, as of 2009, for 6 years. Many have had relatively little exposure to speaking English outside of the classroom, especially so with native speakers. Before having the confidence to speak, they must first build confidence among their classmates. Small team projects with directed tasks are then best suited for this situation.

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Table 3. Web Tech Learning Model

	Year 1 False beginner	Year 2 Upper beginner	Year 3 Lower intermediate	Year 4 Intermediate
Bloom's Digital Taxonomy	Remembering	Applying	Analyzing	Creating
	Understanding		Evaluating	
	LOTS >>>>

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Second year

Year two is concerned with getting students to collaborate and interact with English speakers from around the world. This time should be used to strengthen their confidence in using English with their classmates in a collaborative atmosphere and make it easy for them to interact with foreigners via text based messaging and chatting. To do this, we introduce them to social networking outside of Japan.

Social networking sites (SNS) are most popular with young people in Japan through a website called Mixi. It is a content management system (CMS) like a blog that interconnects different blogs and with real time access to each other via various applications for gaming and chatting. Mixi, unfortunately, is only for Japanese, thus using Facebook is a better option. Twitter, LinkedIn and MySpace are also options in different capacities.

Social networking best lends itself to task completions such as meeting five new friends each week, adding applications that encourage friend making, challenging them to a speed typing test (32 wpm seems adequate), adding a virtual pet, and joining groups and local events. To keep track of their progress in real time, the teacher can online spreadsheets such as with Google docs or Edit Grid.

To make this environment truly collaborative would simply require them to report on what they experienced. Teams can gather and discuss a particular activity, each contributing their experiences in the form of a presentation, posted wiki article, podcast or even a video presentation as news reporters.

Third year

Third year students will now move from text based communication to web based video conferencing.

Skype is a web-based application which allows for voice and video communication free of charge between other Skype users and for a very nominal fee otherwise. Many language schools are offering online lessons via Skype for very reasonable rates. Now almost anyone can teach English or offer conversation by simply plugging in a USB microphone and a web cam. For students this means being able to practice English virtually anytime of the day.

Students are now able to set up voice and video chat groups with friends they trust via Facebook. By inviting these friends to join them in a chat group on Facebook they can then exchange Skype account names and coordinate times to meet and have voice conversations. Some examples of projects students can partake in include reports, presentations, e-reports, podcasts, wiki articles and poster presentations. Not only could they be keeping their own individual blogs, they could collaborate on one blog that focuses on their circle of friends. They could set up their own social network through a service called Ning. They could even become a news reporting agency that puts out one news story a week via podcasts that are indexed on iTunes and actually listened to by people from around the world.

Fourth year

Fourth-year students, at this point, have experienced most forms of communication tools available on the net outside

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of uploading videos to YouTube. They have experienced finding and developing friendships on the net and have learned how to use Skype to freely contact these friends and practice speaking in a useful and engaging way. But what if students were able to combine all of these technologies and meet their friends in a world that offers them activities to do together?

Virtual worlds, such as Second Life, provide students a way to live in a 3D virtual world just as they would in their real life. These worlds are user created; from the clothes they are wearing to the cars they drive and the pets they own. Virtual worlds offer students a chance to live abroad without actually leaving Japan.

Second Life

Gartner, Inc. (as cited in Pettey, 2007) states that 80% of active Internet users will have a "Second Life" in the virtual world by the end of 2011. Second Life is a user-created, web-based virtual world accessible through a freely available software application. Once installed, the user logs in and is taken to a 3D world in which each user is represented by a character, or avatar as it is called. The user is able to edit the appearance of their Second Life self as well as build and create their own personal space within this world. Interaction with other avatars is possible by "teleporting" to destinations within the world. Users, students in this case, can partake in conversations and activities with other registered users using text chat and voice.

Some of the activities the author has done with students in-world include role playing in restaurants and hotels, going to museums, attending live concerts, visiting conferences, looking for a job, budgeting and shopping, scavenger hunts, photo blogging, machinima making (movie making), playing tiny soccer, and dancing. These activities were done in public spaces, and although they were great fun and done mostly with people who are not university students, the author did find that there is a certain degree of security and privacy that would need to be looked after in the school's interest.

Implementation

Language lab

In the coming years, the author predicts students will be as familiar with virtual worlds as they are with using the Internet. To prepare for this, it is necessary for us to begin the planning processes of building language labs for our students to enter these virtual worlds from school. These labs should be made available to students just as they are for Internet access.

Although this paper is not concerned with the implementation as much as it is the curriculum, the author does believe these two models have similarities which can be discussed further. This model will be referred to as the "1 + 6 Steps to Education Technology Integration." We see in Figure 1, change is at the center and all encompassing. It is the first and most important revolving concept within the model. It encompasses every aspect of the process and is constantly referred to as the implementation of the system takes shape. Once the issues of cultural and systemic change have been addressed, and there is an interest to further develop the project, the implementation process begins.

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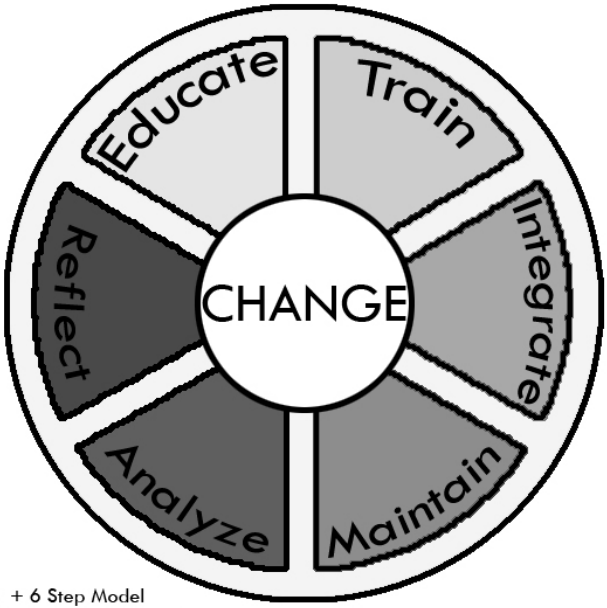

Figure 1. 1 + 6 Step Model

Step 1: Educate

Educate all faculties, staff, technicians and assistants who are to be involved in whole or in part with virtual language learning at the university. These meetings are to show the differences between current methodologies being used and how they should be altered in order to make use of virtual world technology. A solid understanding of vocabulary, technical terminology, hardware and software will ensure that the classes move smoothly and without problems in communication between all involved.

Step 2: Train

Hands-on training and simulations, role playing, task and communicative activities will give members a sense of what it is actually like to be a student. The student's perspective is extremely important in determining the best course of action. Lesson plans should be created based on the experiences each member has with the technology available; not all schools have 60 computers with the best Internet connections and graphics cards so design is critical.

Step 3: Integrate

Once there has been sufficient training and a good understanding of the goals of the department, a course outline can be drawn, a sample lesson plan written, and a template made from which all instructors will be able to use in their classes. This template is by no means fixed and should allow for every instructor to add their creative teaching styles. The integration of these lesson plans into the current curriculum should demonstrate a difference of teaching style. It should be communicative and integrative.

Everyone should have a solid understanding of the objectives and a library of ideas and scenarios which have been well thought out. There should also be necessary backup plans in place and documented expectations from administration from which to decipher and correlate the necessary feedback surveys.

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Step 4: Maintain

The technicians must perform the necessary backups of system data and ensure that all caches and system resources are refreshed for every class. If possible, they should be available to answer any questions during and outside class. Hardware items such as cables and headsets may require replacing from time to time due to the frequency of use. Have backups in place and have them readily available for immediate replacement. Do not fix it, replace it.

Step 5: Analyze

The final week of class should result in a student feedback survey. The questions for this survey should, at minimum, answer the following:

> What was your expectation of this class?
>
> Did it meet or exceed your expectation? Why?
>
> Are you more motivated to study English because of this class? Why?
>
> Do you feel more confident to use English to communicate? Why?
>
> Would you like to continue learning English like this? Why?
>
> How can we make this course better?

The data from surveys, comments from within Second Life, notes, responses and voiced opinions should all be compiled in categories deemed necessary for the most accurate representation of every student's opinion. The data should then be represented in a paper which is to be presented to the administrators following an approval from all members of the team.

Step 6: Reflect

Once this report has been presented, it is the administrator's responsibility to determine if the classes were successful and whether further support of virtual language learning should be pursued. If it is determined that such support is deemed worthy, administration should approve a committee to oversee the future success of the newly formed sections and allocate funds to ensure its growth.

Conclusion

Engaging and motivating students to speak more in class is being inhibited by a lack of interest in the classroom and a mono-cultural environment. Also, the entertainment industry has harnessed our student's attention, making it difficult for us to use traditional teaching methods without being confronted with boredom. Over the past nine years, the author has used traditional textbooks, authentic material, and computer technology, and without a doubt, the integration of technology has motivated students to speak most. This is not to say that traditional methods of teaching have lost their effectiveness, but it does show how alternative methods, namely virtual worlds, are gaining popularity. We need to make these available to our students both inside and outside of the classroom so the students can have as many opportunities to speak as possible. Language labs, web technology and virtual worlds truly afford us the

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ability to provide our students with rich motivating learning environments.

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Appendix 1

Links to essential sites mentioned

http://blogger.com

http://mediawiki.org

http://audacity.sourceforge.net

http://mixi.jp

http://facebook.com

http://skype.com

http://paltalk.com

http://ning.com

http://youtube.com

http://pandorabots.com

http://secondlife.com

http://openlifegrid.com

http://opensimulator.org

http://rezzable.com/pga

http://osgrid.org/

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Appendix 2

Groups and mailing lists to join for information on the benefits of teaching in virtual worlds

Sim Teach

http://www.simteach.com/

SLED Mailing List

https://lists.secondlife.com/cgi-bin/mailman/listinfo/educators

RezED

http://www.rezed.org/

Second Life Research

http://list.academ-x.com/listinfo.cgi/slrl-academ-x.com

Second Life in Education Wiki

http://sleducation.wikispaces.com/