Factors Affecting the Integration of Information and Communications Technology in Teaching English in Taiwan

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Bio Data:

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Abstract

As language and technology are two major focuses of educational reform in Taiwanese higher education, Taiwanese teachers of English as a foreign language have to cope with the challenge of technological and pedagogical shifts occurring in the teaching profession. A basic interpretative qualitative study was employed to understand how and why teachers implemented the information and communications technology into their language instruction and to explore the issues and barriers that teachers encountered when trying to incorporate modern technology into their instructional practice. The findings imply that continuous professional development involving technology integration, specifically for language teachers, should be thoroughly planned. New policies regarding vision and goals of implementation should be made clear to teachers.

Key words: Information and communications technology; computer-assisted language learning; continuous professional development; Internet use

1. Introduction

With the new economic order and advances in computer technology, modern communication has greatly increased international contact. This increasing global contact has also affected the academic and business communities. It has also undoubtedly affected language teaching and learning (Warschauer, 2000), especially English. English has become a global language for international communication (Crystal, 2003). Particularly because of Internet use growth, many more people can now read, write, speak, and listen to English via the computer. Accordingly, the Internet has become a tool for language teaching and learning (Fotos, 2004).

The use of modern technology in teaching languages has been dramatically increasing worldwide over the past decade (e.g., Chen, Belkada, & Okamoto, 2004; O'Dowd, 2003; Pennington, 1999; Toyoda & Harrison, 2002). With the creation of the World Wide Web, it has become possible and feasible for language teachers to make effective use of instructional materials, especially in teaching language and culture (e.g., Belz, 2003; O'Dowd, 2003; Thorne, 2003). Computer-assisted language learning (CALL) programs provide multimedia with video, sound, graphics, and text, which allow learners to be exposed to the target language and the culture. Learners explore the simulated environment with meaningful multimodal forms such as audio and visual input, which facilitates comprehension in listening and reading (Chun & Plass, 1997; Verdugo & Belmonte, 2007). One benefit of using Internet resources is that teachers can easily retrieve the most recent and pertinent information for their students (Moore, Morales, & Carel, 1998). The development of hypertext and hypermedia within the context of the World Wide Web offers a vast array of resources for both teachers and students to search and access authentic materials.

For the past decade, CALL has drawn the attention of Taiwanese language professionals and many have sought out innovative and alternative ways of using computer technology to enhance students' learning and to improve students' English proficiency. The level of increase in numbers of English as foreign language (EFL) teachers involved in CALL can be evidenced by the number of published papers in the proceedings of international symposiums on English teaching held by the English Teachers' Association, the Republic of China (e.g., Lin, 2003; Shih, 2003).

Teachers are the key persons to implement innovation (Fritz, Miller-Heyl, Kreutzer, & MacPhee, 2001) for educational enhancement (Ghaith & Yaghi, 1997). Teachers, however, need to develop technological literacy as well as pedagogical knowledge when applying technology. For successful implementation of the information and communications technology (ICT) into language instruction, it is important to understand how and why teachers use ICT and to explore the issues and barriers that teachers encounter when trying to incorporate ICT into their instruction.

2. Theoretical foundation

In acknowledging the trend toward using the computer technology in language instruction, language teachers will realize that they will soon likely need to undertake various new job responsibilities (Fotos and Browne, 2004) such as putting their courses online, evaluating CALL materials and web sites (Reeder, Heift, Roche, Tabyanian, Schlickau, & Golz, 2004; Susser & Robb, 2004), taking part in campus-wide CALL projects/inter-institutional partnership (O'Conner & Gatton, 2004; Opp-Beckman & Kieffer, 2004), and incorporating and managing multimedia language laboratories (Browne & Gerrity, 2004; Liddel & Garrett, 2004). Teachers, however, vary to a large degree in their experience with and knowledge and skills of computer technology.

Research reports indicate that factors influencing technology integration by faculty are diverse (Brown, 2000; Sugar, 2002). Ertmer (1999) states that the barriers include organizational and pedagogical concerns, technical and logistical issues, and personal problems such as fear. Rogers' theory of innovation adoption (1995) consists of five attributes: relative advantage, compatibility, complexity, trialability, and observability. He found that 49 to 87 percent of the variance in the adoption rate of innovation could be explained by these five attributes. Other variables are types of innovation decisions, communication channels, nature of social system, and the extent of change agents' promotion efforts.

Park (2003) incorporated seven variables from three perspectives in his study. The results showed that computer experience, subjective norm, self-efficacy, relative advantage, and complexity are important predictors of the level of Web-assisted instruction. Time and support, however, indicated no significant effect, which contradicts

Park's qualitative findings. When teachers feel seriously uncertain about performing tasks or have doubts about their performance achievement, they are unlikely to try innovation and they are unwilling to put much time and effort into it (Park, 2003). Limited time and heavy workload may inhibit teachers from implementation.

Teachers want to know if they can integrate the computer technology with education in ways that effectively link with the content of curriculum as well as the different components and stages of the learning process. In one study, teachers expressed a need for understanding the potential of technologies and the appropriate pedagogy for technology integration with regard to the fit of each with their personal philosophies of teaching and learning (Weasenforth, Biesenbach-Lucas, & Meloni, 2002).

Moreover, with the rapid growth of innovative technologies, teachers need to keep abreast of technological innovation so that they can know where to retrieve information and obtain resources and tools (Browne, Maeers, & Cooper, 2000). Modern technologies are not as easy to grasp as traditional technologies were, many of which only required 'push the button' skills to operate (Bates, 2001). Therefore, teachers may feel tremendous pressure about mastering the use of computer technologies in the first place and then later may find it difficult to keep abreast of technological changes (Davies, 2003).

Teachers need opportunities to expand their knowledge, to try out innovative methods, to exchange ideas with experts and their peers, and to refine their skills so they may more quickly respond to the new developments in their fields (Browne, Maeers, & Cooper, 2000). Interdisciplinary teams can solve problems together, allow team members to benefit from their colleagues' ideas and foster the sharing of materials (Johnson & Johnson, 2004).

Teachers are not only concerned about where to retrieve information and resources and how to obtain knowledge and skills about technological innovation. They are also concerned about how to integrate new technology into instruction and how to take the most advantage of it (Chen, 2003). Most one-time workshops just teach teachers skills using a specific software program without demonstrating good and appropriate teaching strategies and without changing teachers' behavior (Buckley, 2002; Koehler, Mishra, Hershey, & Peruski, 2004). Therefore, teachers are likely to feel inadequate and

incompetent with respect to technology integration, and they may feel uncertain about whether it will enhance student learning.

Research reveals that there are a variety of administrative challenges and complicated problems facing teachers in all areas including language instruction in computer technology application. Understanding organizational culture is crucial for institutional change (Finley & Hartman, 2004). Three barriers that keep college leaders from establishing an environment that allows teachers to take advantage of technology resources include the needs for appropriate 1) planning and budgeting for instructional technology, 2) organizational structures and communication, and 3) faculty rewards and incentives (Epper, 2001, p.9).

Epper (2001) pointed out trends and issues underlying the need for faculty instructional development. These include increased technology use due to social and economic influence, flexible approaches to teaching and learning on-demand, a new and different picture of competition in higher education (Flowers, Pascarella, & Pierson, 2000; Kuh & Vesper, 1999; Pascarella & Terenzini, 1998), and the potential of technology use to improve teaching and learning (Epper, 2001). As higher education is preparing students for future markets, teachers should be equipped with the necessary knowledge and skills to meet the needs of the students in the millennium (Pascarella & Terenzini, 1998; Smith, 2002) and to follow along with the trends of a global knowledge-economics society.

Recent studies have highlighted many benefits of continuous professional development, including the following:

- Guiding teachers' understanding of technologies and the potentiality of technology for meaningful instruction (Bullock & Schomberg, 2000;Cavanaugh & Cavanaugh, 2000; Galloway, 2000; Terwindt, 2000)
- Facilitating teachers' acquisition of technological literacy and skills (Browne et al., 2000; Childress & Braswell, 2000; Slobodina, 2000)
- Assisting teachers' know-how for retrieving information and garnering resources and tools (Repman, Carlson, Downs, & Clark, 2000)
- Improving teachers' abilities for monitoring student progress (Hargrave, Foegen, & Schmidt, 2000)

The purpose of the study is to understand how and why teachers implement the information and communications technology into their language instruction and to explore the issues and barriers that teachers encounter when trying to incorporate modern technology into their instruction. A basic interpretive qualitative method was employed to address the following three basic research questions:

1. How do EFL teachers in northern Taiwanese higher education institutions use ICT in their instructional practices?
2. What are their purposes for using ICT in teaching English?
3. What are the factors that influence these Taiwanese EFL teachers in the use of ICT and what are the issues and barriers that these EFL teachers encounter when trying to incorporate modern technology into their instruction?

3. Method

3.1. The research design

To understand how and why EFL teachers integrate ICT into instruction, basic interpretative qualitative study design (Merriam, 2002) was employed. The process, strategies, and data analysis of this qualitative research are all inductive. The qualitative results can provide rich, contextual understanding of certain findings and strengthen a detailed/in-depth understanding of a certain problem. According to Merriam (2002), the qualitative study is designed to "uncover or discover the meaning people have constructed about a particular phenomenon. The researcher wants to obtain an in-depth understanding of a phenomenon, an individual, a situation. …They want to know how people do things" (p.19).

Qualitative data collection via interviews serves several purposes: These teachers' replies allow insight into different levels of ICT and allow the researcher to understand how these teachers have applied ICT, and whether the results corroborate the findings from previous studies. Their replies also allow the researcher to explore whether there are other factors that influence teachers' use of ICT (than those included in the literature) and to determine teachers' purposes for using ICT. The purpose of the qualitative study is to explore "what" factors influence these teachers' use of modern technologies and to explain "how" and "why" they use these technologies. The researcher conducted

interviews to obtain information that is more complete and to gain an in-depth understanding of the issues (Gall, Gall, & Borg, 2003).

3.2. Participants

Non–random samples were selected purposefully in this qualitative study. Participants were located through the researcher's professional networks. Twenty-two teachers were interviewed. Most of the teachers interviewed were referred to the author by other teachers based on their use of computer technologies as a teaching tool and two were known personally to the researcher. These 22 teachers, 11 male and 11 female teachers, were from 16 northern different universities and colleges. Six were from national universities whereas the rest are from private ones (70% of Taiwanese higher education institutions are private). Teachers who extensively use computer technology include those who have taught CALL courses in their institutions or who have publications on the use of computer technology. These teachers may also have their own Web sites or may have received grants for conducting national projects or institutional research related to technology application into instruction.

3.3. Research instrument

*The interview protocol. A*n interview protocol was prepared for the interviews with selected teachers. That is, specific questions (e.g., What is your purpose of integrating the information and communications technology into your instruction?) for the interview were prepared prior to the interviews. The interview protocol was developed based on reviewing literature and on the research questions. The researcher consulted experts in the fields of both language and technology to revise the interview protocol (see Appendix).

3.4. Data collection and analysis

The interviews were digitally recorded, transcribed verbatim, and then translated into English for data analysis. All teachers except one were interviewed in person. The interviews lasted from an hour to an hour and a half. Due to a time conflict, one teacher was interviewed by telephone during a call lasting forty-five minutes.

As the study intends to discover and understand the meaning that the use of information and communications technology has for the participants, data were gathered to build concepts and theories instead of being tested in a positivist study. According to Merriam (2002), "Typically, findings inductively derived from the data in a qualitative study are in the form of themes, categories, typologies, concepts, tentative hypotheses, and even substantive theory" (p.5). Therefore, the data are analyzed to identify whether there are recurring patterns or common themes among these participants. An initial analysis was done after each interview. By using a constant comparative method, data were coded and recoded until themes emerged (Yin, 2003).

4. Findings

A number of themes and patterns emerged from these 22 interviews. These themes/patterns include how teachers use ICT, their purposes for using ICT; the parameters influencing their use of ICT; and the issues and barriers aiding or detracting from their integration of ICT into their instructional practices. Pseudonyms are given to them for confidentiality purposes and to ensure privacy of these teachers.

4.1. Research question 1: How do EFL teachers in northern Taiwanese higher education institutions use ICT in their instructional practices?

4.1.1. Online materials and Internet resources supplement classroom instruction and expand students' learning opportunities outside the classroom.

Most teachers only use Internet resources as a source of supplementary materials. These teachers think class time is limited and they feel they do not teach enough during the class period. They want students to have more opportunities to learn and obtain more knowledge and skills and they expect students to practice more after class, especially for skills such as pronunciation learning. As classes at Taiwanese higher education institutions generally are very large, large class size can hamper language instruction, and these teachers agree that the Internet provides a good tool for teachers to expand students' learning outside their classroom. This flexibility not only applies to expanding where the students can learn but also provides the flexibility for engaging a broader spectrum of

students such as different proficiency levels and students who are away from class because of extended illness.

Sue-chin said, "My online learning materials are mainly supplementary. I wanted to use the Internet to provide more opportunities for my students to learn. I use PowerPoint to present materials and interactive exercises making tool, Hot Potatoes to create exercises and activities. I put all my handouts and notes online for my conversation class students to preview and review."

Tsun-hsiang thinks that modern technology provides good practice for students' listening comprehension. As a bonus, students like to use the Internet because they get to discuss things with it. Chung-hsiang noted that, "By using the Internet, the teacher provides many opportunities for students to learn beyond the classroom and after class. It is self-directed learning for students, unlimited by time and space. In addition, the fixed time in the classroom may not be suitable for those who don't feel well or who are physically tired.

Hsin-Yin sometimes makes use of online discussion board. She stated, "I spent additional time explaining theories and more clearly expositing writing strategies. By putting my materials on the Web, I provide my students more opportunities to review after class. Information and communications technology also provides chances for those who don't feel well and did not come to class to learn."

4.1.2. Internet resources are applied to the listening aspects of the language instruction curriculum.

These teachers use the Internet resources most to develop their students' listening skills. While many teachers would agree that language learning usually starts from listening, in the past they often had to rely on reading as an instructional method due to large class sizes. As a result, students often did not get many chances to listen and speak. Many online listening materials allow students to practice listening. Most teachers take advantage of online broadcasts as listening materials. Free recording software is also available for teachers to edit audio files.

Yu-Chu, who earned a degree in Instructional Systems Technology in the US described her classes as follows: "I bring my students in my listening class to the world

by using ICT. In the beginning, I guided my students to resources links. I showed them how to find an online feature with the famous Taiwanese film Director Li Ann's complimentary remarks when he received an award. This feature was not available on domestic broadcasting stations. After a few such demonstrations, my students began exploring the Internet by themselves. I asked them to bring two news items for discussion, each time when class met. I asked my students to share what they have heard along with their opinions, with their classmates. Students can listen to the news they chose as many times as needed, based on their learning pace. I encouraged students to listen to CBS (Columbia Broadcasting System) news, which is free. Before listening to CBS news, students are introduced to an online listening resource called 'Randall's ESL Cyber Listening Lab,' which features three listening comprehension levels. They gradually are able to listen to CBS, which requires a higher level of listening comprehension."

   Jung-shan, an active Web-user said, "In my listening course, I built a self-learning virtual environment for my students for these reasons. First, class-time is limited; students only meet once a week for two hours. Second, classroom instruction is less interactive. Third, my class-size is large and fourth, there is a broad variation in students' proficiency levels. Students need a lot of time doing self-learning to improve themselves. So, I have taken advantage of the instructional platform that my university provided and put all my materials on it. Students can learn anytime and at their own pace. They can listen as many times as they want to a session that I might have time to play only once in class."

4.1.3. ICT-based instruction is primarily in the experimental phase.
The teachers I interviewed also incorporate ICT into curricular areas other than listening. Most teachers classify their current instructional phase as experimental. For example, Tsun-hsiang uses a voice board for his students to record their speech which he then posts on the Web to share with the other classmates. Another teacher, Chung-cheng, uses a discussion board to teach translation. He asks his students to exchange ideas via this board before they do translation assignments. Still another teacher, Wan-ju, applies online analytical tools in a graduate course in which students analyze journals and do corpus analysis. These teachers are interested in incorporating the available Internet tools

and resources to create online learning activities on their own. While they have not evaluated the effectiveness of students' learning outcomes, these teachers are implementing strategies to actively engage their students in learning.

4.1.4. Blended teaching is a trend.

Language teachers are increasingly experimenting with English for Academic Purposes (EAP) courses with blended teaching, to see if this is an effective method for teaching foreign languages.

For one model in blended teaching, every other week students alternately complete online lessons or attend classes. A few teachers have already begun using blended teaching in their institutions for the convenience of evening and weekend students. These students are nontraditional students who have a full-time job in addition to attending classes. Therefore, blended teaching meets the need of these students. Chia-chin said that she has done this for two years and so far students are quite satisfied. Her students highly value the convenience of this type of teaching. However, Chia-chin does not think blended teaching is necessary for daytime students because they are full-time students, so she prefers to see them face-to-face, and often.

Wan-ju said that he was, "…teaching an English for Academic Purposes course, which is a blended teaching for writing course offered for pre-service English majors of the graduate school. Students analyze journals and do corpus analysis. Both online and textual materials are used for the course. They alternately learn in different settings – mostly in a regular classroom and sometimes in the computer lab. While staying in the computer lab, students do some online activities."

4.2. Research question 2: What are their purposes for using the ICT in teaching English?

Just as the teachers interviewed use the information and communications technology differently, they also use modern technologies for different purposes.

4.2.1. Enhance students' motivation and interest

Most teachers try innovative teaching to increase students' interest in learning and enhance their motivation. Tsun-hsiang and Chung-cheng are two good examples. In

Chung-cheng's translation course, he asks students to discuss their assignments via a discussion board, whereas in Tsun-hsiang's listening & speaking course, he asks students to record their speech on different topics via a voice board each week.

For Chung-cheng's translation class, he posts assignments and sets up a discussion area online each week. Chung-cheng feels the increased interaction of the discussion board breaks with tradition and makes his translation course more interesting. He said, "My major motivation of using online tools was that most students did not enjoy translation at all in the past. Teachers would often hear that translation is a boring course. My students love discussing their ideas before they do translations on their own."

Chia-hsiang noted that, "It is excellent that students feel at home with digital resources and that using these resources motivate them in learning…They are also motivated because they can help me with hardware and software. They are often very expert. They help me make proper choices in popup windows and they help me adjust displays. They also find and download helpful software support often during lessons. When they can help with technical support, it builds classroom affiliation."

4.2.2. Provide variety for instruction and commitment to continuous innovation
Innovative teachers would use any strategies, try any methods, and apply any media to be creative in their instruction. So, most teachers stated that they use ICT to provide variety. Yu-Chu said, "I view the computer technology as a tool to provide variety for my students." In addition, Tsun-hsiang noted that, "I continually look for innovative ways to use ICT in my instruction."

Ting-fung stated, "Teaching is art and vivid instruction is necessary." However, one senior teacher recognized the trend in using modern technology in instructional practices but still doubted whether such innovations would affect students' learning.

4.2.3. Provide authentic, updated, and multimedia instructional materials
Audio-visual aids are important for language teaching and learning. Hyperlinks allow the integration of graphic, audio, visual, and text materials, which facilitates teaching culture and has brought convenience for language teaching and learning such as listening and reading. Teachers can easily take advantage of many authentic materials offered on the

World Wide Web. Tsung-hsiang feels the Internet provides good resources for listening and speaking teachers. He stated, "While traditional textbooks may be out of date after only a year or so and getting an update may be slow, Internet broadcasts are current, authentic, and multimedia."

Chia-hsiang realizes the benefits of ICT use: autonomous learning, real, comprehensible, easy to use, and providing cultural understanding. Therefore, he thinks ready-made teaching materials to accompany online materials might be good. He also expressed the need for more knowledge about ICT use and more training about copyright laws and sharing online.

4.2.4. Develop students' autonomous learning and lifelong learning

Autonomous learning has been an issue in education in Taiwan for a long time, and has caused heated debate. This is because in the past keen competition for higher education kept Taiwanese students under pressure to study. When students only value learning as a means to an end, gaining access to higher education, they may be less likely to pursue any type of self-directed learning on their own. Also the long history of this "examination system" society has resulted in test-oriented instruction and many students study solely for placement (Zeng, 1999). Because the Internet allows ubiquitous instant access to information and communication, many teachers look forward to its use in promoting students' autonomous learning.

Ming-jen integrates ICT into his instruction because of his teaching philosophy. Ming-jen said, "Cultivating students' interest in learning and improving their skills in self-learning are extremely important. As class time is always limited, teachers may have difficulty promoting students' habits of self-learning, especially when there are many students in each class. How much effort students put into learning outside the class and how much time they spend practicing are my main concerns. Therefore, I use ICT as a tool for indicating students' self-learning habits after class. I hope by providing various links for resources on the Internet, students can construct their own knowledge by self-exploring and self-discovering."

Lifelong learning has been another long-term goal in Taiwanese higher education. Currently, many institutions encourage teachers to put their courses online so that more

adults can return to colleges for further education. Therefore, institutions either purchased course management software or created their own instructional platforms to prepare for these curriculum changes. So, most interviewed teachers got a head start integrating online learning into their current instructional practices. The information and communications technology should allow continuing education goals to be easily reached in the near future.

4.3. Research question 3: What are the factors that influence these Taiwanese EFL teachers in the use of ICT and what are the issues and barriers that these EFL teachers encounter when trying to incorporate ICT into their instruction?

4.3.1. Teacher training

Teacher training is crucial for technology integration into language instruction. Those who obtained a technology-related degree felt that it is much easier for them to know where the resources are and to know how to use them, compared to other EFL teachers. Yu-chu said, "I don't think the creation of online activities and online materials is time consuming, partly because my educational background has prepared me and partly because I did not ask everything to be perfect."

Ming-jen believes that most teachers in his university would like to take advantage of computer technology to assist with their instruction, but the barriers are education and resources. He doesn't like the word "barriers." He prefers "thresholds." He explained, "I believe that to be able to use and understand technology is the learning threshold, whereas to obtain the technology is the money and energy threshold. As long as they can pass these thresholds, I feel teachers will use technology for teaching. This is also a process of education for teachers."

Currently, most institutions regularly offer workshops for teachers to familiarize with the course management software they purchase or design. Teachers can use these tools for editing their materials and publishing them online. They encourage teachers to put their materials online to prepare for the long-term goal of institutional development. These innovative teachers are able to make use of these facilities and integrate ICT into their current instructional practices in various curricular areas. Only recently a course

titled 'Computer-assisted Language Learning' was contained in the pre-service teacher-training program at most universities and colleges. Accordingly, CALL is new to most EFL teachers. Most in-service teachers did not receive IT/CALL training while they were in their college pre-service training program. These teachers should rely on handy resources to create their technology lessons.

4.3.2. Preparation for long-term goals of their institution

Digitalization of courses seems to be a common long-term goal for higher education institutional development in Taiwan. In the short term, funds are available in the institutions because administrators see online learning as a way to boost their enrollments. However, there is lack of long-term planning and goal setting for technology integration into classrooms. Teachers try to match up their instructional methods with school policies; however, they are unsure whether modern technology implementation is effective or whether it enhances student learning.

Wan-ju stated, "I feel that resources are adequate in my university. However, I wonder about the long-term planning for technology integration. In my view, the school IT personnel have little sense of systematic management when they purchased a new piece of technology. Their response has been to demonstrate the new items to the teachers even though the teachers receive help from their assistants. I have seen many hardware types and platforms come and go and I become reluctant to keep abreast with the changes. Now I just keep up with the materials I use."

4.3.3. Teachers recognizing the trend in integrating ICT into instruction

All interviewed teachers, including a senior teacher who does not use the computer, recognize the trend toward the use of computer technology in instruction. From a practical standpoint, in dealing with today's students, most teachers said that they should try to keep abreast of modern technologies. In doing so, they will realize the virtual world facing today's students and they will understand more about that world even though teachers themselves may not use ICT in their instruction.

Yu-chu agrees that using technology is a trend and feels that future classrooms will be all equipped with modern technological equipment and Internet access. She stated, "Most

students today have grown up online and are quite comfortable in using ICT. I did not believe the myth that ICT-based instruction would absolutely improve students' learning outcomes. I just think it is natural for students to learn this way."

Chih-hung's experience in the contemporary world has shown him that technology is a catalyst for change. He has sensed the changes information and communications technology have brought to language teaching and expects the requirements for teachers to increase more and more. He stated, "In case universities require language teachers to take on more responsibilities in the future, I will be more prepared."

4.3.4. Availability

The idea that there are abundant resources and tools on the Internet, so there is no reason why teachers should not take advantage of them, influences teachers' use of information and communications technology. Once these teachers discovered that ICT can provide resources and tools for them to enrich their instruction, they immediately started applying them.

Tsun-hsiang took several technology-related courses and found them to be quite useful, he noted, "Teachers should take advantage of various types of resources and tools to assist their instruction and enhance students learning since we are not native speakers of English. ICT provides good resources for teachers teaching listening and speaking."

Ming-jen also thinks teachers should absolutely take advantage of ICT. He asserted, "With the Internet, I can upload multimedia materials to my website for my students to retrieve. It's simple, fast, convenient, and provides the best materials. Suppose I found a good book or an article that is free, I definitely would want to share such a resource with my students. With a pdf file, I might only spend three minutes uploading such a book."

4.3.5. Relative advantage and environmental concerns.

Class sizes are usually large in Taiwanese educational settings, so the use of hard-copy documents has long been a burden for institutions, teachers, and the environment. The advantages of electronic documents concluded from the interviews are: 1) Teachers can save paper for notes and handouts; 2) Teachers can share good materials without having to make lots of copies; 3) Providing links to some materials rather than supplying the

materials themselves may circumvent possible copyright infringement. Chih-hung, a part-time teacher, stated, "I find using ICT for instruction is good for the environment because it saves paper. It's also good for teachers because it saves us the work and expense of preparing handouts for large classes."

4.3.6. Time and workload

Most teachers said that it was really time-consuming to create online learning materials and activities except the two teachers who used materials created by publishers. One teacher said that anything related to computer use takes time. Most interviewed teachers don't mind taking time creating materials or learning new tools, yet teaching load, service, and research take their time. Accordingly, they are hesitant to invest more time on online instructional aids if they are not sure that the activities and materials are effective.

Tsun-hisang spent many hours creating online learning activities. He said, "I believe that there must be a voice board when there is a message board. So, I spent considerable time searching for such a tool. The first one I found was so expensive that I couldn't afford it. So, I kept on searching. Finally, I found a voice board that was free and allowed 10 gigabytes of storage. Then I spent much more time evaluating it and uncovering its advantages and disadvantages. Overall, it works fine for my students."

Hsin-yin stated, "I have a great foundation for using technology in teaching, and it may be easier for me than for other teachers who lack my background. I still think preparing the materials is time consuming, especially for a new course. For example, converting materials to html files and getting permission to upload my materials. While textbooks generally provide some activities and exercises for teachers, when I use the computer, I have to design my own worksheets and get them into digital form."

Sue-ching has a positive attitude toward using information and communications technologies and intends to create materials for each of her courses and to develop more online materials. However, she has dropped back on attending workshops during the past two years. She stated, "I don't have time to practice the skills I learn. If I don't immediately apply the skills I learned in the workshop, I will easily forget. In addition, I am not sure of the software taught in the workshop is related and applicable to language teaching. I do not have time to invest on unnecessary training."

Chih-hung believes most teachers have good intentions and would have better capabilities if their colleges offered some courses for teaching the faculty. However, he stated, "I know creating online materials takes a lot of time from my personal trials. Once I created a course but had to abandon it in the middle because the time required for typing the materials and converting the audio files was prohibitive. So developing quicker ways to create online materials and reducing teachers' work loads are both issues."

Chia-hsiang stated, "I've been using a lot of materials from the Internet lately and I really want to use it more, but the problem is time and information. If I had more access to training and convenient facilities, I would probably use it every day, whether in writing or listening/speaking class."

4.3.7. Feelings of uncertainty

Teachers' feelings of uncertainty will hinder them from using technology. For example, the unforeseen difficulties from technologies have been a concern for most teachers. Sue-chin stated, "My university is trying hard to meet the needs of its teachers. However, there are still limitations and we have problems with hardware and hackers that are difficult to control. The server doesn't have enough capacity for teachers to put their language learning materials online, and the network often goes down unexpectedly. The network also tends to crash when many students try to turn in assignments at a due date. Teachers can't rely on the university network too much, because the stability of it is sometimes beyond their control." Other feelings of uncertainty include worthiness of time and money investment and efforts.

4.3.8. Institutional support

Institutional support in the form of commitment to funding is crucial for curricular reform. Availability and maintenance of infrastructure are only one aspect. The online courses still need to be developed and published. Most institutions have provided minimal financial support so far, providing incentives and grants to teachers for developing e-learning courses. The teachers developing these courses are doing so in addition to their regular course-loads.

Chia-hsiang has found no inherent limitations in using ICT at his university, but barriers exist in good equipment availability in some classrooms. He also needs technical backup, more software and hardware. Above all, he would like to know more about the many technologies such as "Moodle." When he was asked about the need for workshops, materials, encouragement, colleague discussion, and so on, he said, "The technology is great in Taiwan. I feel like I am living in a desert when it comes to support. I'm very, very thirsty."

Ming-jen's university has incentives for faculty who are interested in creating online learning materials in addition to their regular courses. Faculty who do not already use ICTs as part of their instruction can't afford to create online learning materials. He stated, "Compared to the effort and time language teachers spend, the funding is insufficient and only a few teachers apply for it. While there are assistants to help edit files and create Web pages for faculty, in reality, the amount of support these assistants provide is dependent on their individual knowledge and skills. Unless the assistants are fairly knowledgeable, language teachers who do not understand how to use the Internet or its tools may have difficulty getting the necessary steps accomplished. For example, getting a tape converted into an mvw (movie) file."

4.3.9. Cooperation or team-work

The design of ICT-based language instruction in most institutions is a solitary activity. Only 3 of the 16 universities and colleges that the interviewees are from have cooperative projects. Tsun-hsiang said, "Teachers at my university do not cooperate on projects, so I just worked on his own." At Chung-cheng's university, no one incorporated ICT into his or her instruction. Chia-hsiang stated, "Sharing things with others is a good idea. Yet, currently there is little interaction among teachers at my university."

In contrast, two leading teachers in Sue-chin's department have embraced integrating technology into their instruction. She said, "These two have initiated several cooperative projects such as the University Excellence Project sponsored by the Ministry of Education (MOE) and have gotten the other teachers involved. These cooperative projects have motivated the other teachers and gotten them familiar with the basic concepts and skills behind ICT instructional techniques. Those teachers who were

influenced by the tech-savvy teachers in their cooperative projects continued to create online materials for their courses later on. The sharing of solutions and breakthroughs during the process is supportive. Therefore, almost half of their teachers engage in Web-based instruction."

4.3.10. Compatibility

Teachers would like to know if ICT use is applicable to certain course content or what teaching methodologies they can use; this is an area in which additional dialogue would be particularly helpful. Ting-fang figured out her own ways of computer integration, but she pointed out that "To learn technological skills is not enough. I need to have pedagogical knowledge for ICT-integration instruction. I need to know the teaching methodologies and I am curious about which portion of the content is appropriate for incorporation. I think teachers should learn more about the content aspects of teaching for using the computer."

4.3.11. Workshops focused on technology application in language teaching

Language teachers would like not only to improve their technological literacy but also to empower their pedagogical strategies in application of modern technologies. Ting-fang said that teachers like her who lack technological literacy and knowledge prefer a teacher development program like one held by the Language Teaching and Testing Center and the Ministry of Education in 2002 and 2003, which mainly focused on technology integration in language instruction. She found a course like this she had taken to be quite beneficial and motivational. She would prefer similar programs to be continued and to be held every half a year or every year at least.

She further said, "By gaining information on technology in frequently held programs or workshops, teachers could keep abreast of modern technology upgrades, and they could learn from other teachers in the field. Such programs could offer opportunities to exchange ideas with other teachers who have similar interests, and could offer opportunities for teachers to work together."

Chung-hsiang's university provides workshops for teachers to learn some online tools. He made such remarks as, "I think those tools are generally for teachers in all disciplines,

not specifically for language teachers. They provide Breeze using PowerPoint. I feel PowerPoint is not suitable for language teaching because there is no real interaction. I would prefer training for convenient, easy-to-use software that is suitable for language instruction and suitable for teachers with limited computer knowledge like many teachers in my university. If such software is unavailable, software developers and language teachers should work together to create software for language instruction."

5. Conclusion

In summary, ICT integration instruction is primarily in the experimental phase and half of these interviewed teachers use ICT to try out innovative methods in their instruction. Most use Internet resources as a source of supplementary materials and several have started trying blended teaching for a change of curriculum. While these teachers have unique strategies for different curricular areas, most use online resources to develop their students' listening skills. They take advantage of the Internet to provide authentic, updated, and multimedia instructional materials. Their ICT integration instruction aims to enhance students' motivation and interest and to assist students in developing autonomous and lifelong learning. Nevertheless, there are various issues, barriers, and challenges facing these interviewed teachers, or even today's language teachers. Therefore, most teachers expressed the need for support, particularly continuing professional development, to confront and accept the challenges ahead.

This study clearly shows that only when we begin to provide effective continuing professional development, will we be able to expect fruitful realization of the potential of ICT to improve the quality of learning at higher education institutions. Accordingly, Taiwanese educational leaders and policy makers should develop long-term and adequate funding for ICT integration instruction, including ongoing professional development for teachers. Higher education institutions in Taiwan should place emphasis more on technology integration in the classroom than in distance learning. Administrators should try to understand and meet the needs of language teachers so that they can provide necessary and appropriate support for language instruction. They need to efficiently and carefully consider budget for essential expenditure on hardware and software. While Taiwanese higher education institutions place great emphasis on the language proficiency

of college students and language education, they should also attend to the need of language teachers for knowledge, skills, and instructional strategies using modern technology and for enhancing student learning. Ongoing professional programs or workshops should not be techno-centric only. Pedagogical content technological knowledge (Zhao, 2003) is crucial for the effectiveness of teacher education.

The limitations of the study were the fact that data collection was confined to the teachers referred by other teachers or two of the researcher's acquaintances. The researcher was also not able to reach some of the active-users in several institutions.

Future research should focus on how teachers evaluate the learning outcomes of their students in using information and communications technology, and should try to gauge how ICT use assists students' development of autonomous learning.

References

Bates, A. W. (2001). Beyond button-pushing: Using technology to improve learning. In R. M. Epper & A. W. Bates (Eds.), *Teaching faculty how to use Technology: Best practices from leading institutions* (pp.141-152). Westport, CT: The American Council on Education, ORYX Press.

Belz, J. A. (2003, May). Linguistic perspectives on the development of intercultural competence in telecollaboration. *Language Learning & Technology, 7* (2), 68-117. Retrieved September 17, 2004, from http://llt.msu.edu/vol7num2/belz/default.html

Brown, H. D. (2000). *Teaching by principles: An interactive approach to language pedagogy*. New York: Longman.

Browne, C. & Gerrity, S. (2004). Setting up and maintaining a CALL laboratory. In S. Fotos & C. M. Browne (Eds.), *New perspectives on CALL for second*

language classrooms (pp.171-198). Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.

Browne, N., Maeers, M., & Cooper, E. (2000). A faculty of education as a community of learners: Growing to meet the demands of instruction and technology. In B. Gillan & K. McFerrin (Eds.), *Faculty development* (pp.431-435). (ERIC Document Reproduction Service No. ED444497).

Buckley, D. P. (2002, January/February). In pursuit of the learning paradigm: Coupling faculty transformation and institutional change. *Educause Review,* 29-38.

Bullock, C. D. & Schomberg, S. (2000). Disseminating learning technologies across the faculty. International Journal of Educational Technology, 2(1), 1-12. Retrieved January 8, 2006, from http://smi.curtin.edu.au/ujet/v2n1/ bullock/index.html

Cavanaugh, T. & Cavanaugh, C. (2000) Interactive PowerPoint for teachers and students. In B. Gillan & K. McFerrin (Eds.), *Faculty development* (pp.496-499). (ERIC Document Reproduction Service No. ED444497).

Chen, H. J. (2003).電腦網路輔助英語學習與教師在職進修. [*Internet-assisted language Learning and professional development*]. *Seminar on Multimedia English Teaching*, Chungtai Institute of Health Sciences and Technology, 16-33.

Chen, J., Belkada, S. & Okamoto, T. (2004, May). How a Web-based course facilitates acquisition of English for academic purposes. *Language Learning & Technology*, *8*(2), 33-49. Retrieved October 22, 2005, from http://llt.msu.edu/vol8num2/chen/default. html

Childress, M. & Braswell, R. (2000). Teaching the teachers: Faculty development institutes at two universities. In B. Gillan & K. McFerrin (Eds.), *Faculty development* (pp. 474-478). (ERIC Document Reproduction Service No. ED444497).

Chun, D. M. & Plass, J. L. (1997). Research on text comprehension in multimedia environments. *Language Learning & Technology, 1* (1), 60-81. Retrieved October 11, 2005, from http://llt.msu.edu/vol1num1/chun_plass/default.html

Crystal, D. (2003). *English as a global language.* Cambridge, UK: Cambridge University Press.

Davies, G. (2003). Perspectives on offline and online training initiatives. In U. Felix (Ed.), *Language learning online: Towards best practice* (pp.193-214). Lisse, The Netherlands: Swets & Zeitlinger.

Epper, R. M. (2001). The new economy meets the ivory tower. In R. M. Epper & A. W, Bates (Eds.), *Teaching faculty how to use technology: Best practices from leading institutions* (pp.1-18). Westport, CT: The American Council on Education, ORYX Press.

Ertmer, P. A. (1999). Addressing first – and second – order barriers to change: Strategies for technology integration. *Educational Technology Research & Development, 47*(4), 47-61.

Finley, L. & Hartman, D. (2004). Institutional change and resistance: Teacher preparatory faculty and technology integration. *Journal of Technology and Teacher Education, 12*(3), 319-337.

Flowers, L., Pascarella, E. T. & Pierson, C. T. (2000, November/December). Information technology use and cognitive outcomes in the first year of college. *The Journal of Higher Education, 71*(6), 639-667.

Fotos, S. (2004). Writing as talking: E-mail exchange for promoting proficiency and motivation in the foreign language classroom. In S. Fotos & C. M. Browne (Eds.), *New perspectives on CALL for second language classrooms* (pp.109-129). Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.

Fotos, S. & Browne, C. (2004). The development of CALL and current options. In S. Fotos & C. M. Browne (Eds.), *New perspectives on CALL for second language classrooms* (pp.3-14). Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.

Fritz, J. J., Miller-Heyl, J., Kreutzer, J. C. & MacPhee, D. (2001). Fostering personal teaching efficacy through staff development and classroom activities. *The Journal of Educational Research, 88*(4), 200-208.

Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational research: An introduction*. (7th ed.). Boston, USA: Pearson Education, Inc.

Galloway, J. P. (2000). Understanding graphics for effective communication. In

B. Gillan & K. McFerrin (Eds.), *Faculty development* (pp.509-514). (ERIC Document Reproduction Service No. ED444497).

Ghaith, G. & Yaghi, H. (1997). Relationships among experience, teacher efficacy, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education, 13*(4), 451-458.

Hargrave, C. P., Foegen, A. & Schmidt, D. (2000). Teacher educators' reflections on using group response technology. In B. Gillan & K. McFerrin (Eds.), *Faculty development* (pp.502-508). (ERIC Document Reproduction Service No. ED444497).

Johnson, D.W. & Johnson, R.T. (2004). Cooperation and the use of technology. In D. H. Jonassen (Ed.), *Handbook of research on educational communications and technology* (2nd ed.) (pp.785-811). Mahwah, New Jersey: Lawrence Erlbaum Associates.

Koehler, M. J., Mishra, P., Hershey, K. & Peruski, L. (2004). With a little help from your students: A new model for faculty development and online course design. *Journal of Technology and Teacher Education, 12*(1), 25-55.

Kuh, G. & Vesper, N. (1999, April). *Do computers enhance or detract from student learning?* Paper presented at the annual meeting of the American Educational Research Association. Montreal, Canada. (ERIC Document Reproduction Service No. ED429592).

Liddel, P. & Garrett, N. (2004). The new language centers and the role of technology: New mandates, new horizons. In S. Fotos & C. M. Browne (Eds.), *New perspectives on CALL for second language classrooms* (pp.27-40). Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.

Lin, H. C. (2003). Effectiveness of online poetry learning for EFL learners. *Proceedings of the Eleventh International symposium on English Teaching/Fourth Pan-Asian Conference, Taipei, Taiwan*, 440-448.

Merriam, S. B. (2002). Assessing and evaluating qualitative research: Examples for discussion and analysis. In S. B. Merriam & Associates (Eds.), *Qualitative research in practice* (pp.18-33). San Francisco, CA: Jossey-Bass, A Wiley Company.

Moore, Z., Morales, B. & Carel, S. (1998). Technology and teaching culture: Results of a

state survey of foreign language teachers. *CALICO Journal*, *15*(1-3), 109-128.

O'Connor, P. & Gatton, W. (2004). Implementing multimedia in a university EFL program: A case study in CALL. In S. Fotos & C. M. Browne (Eds.), *New perspectives on CALL for second language classrooms* (pp.299-316). Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc.

O'Dowd, R. (2003, May). Understanding the "other side": Intercultural learning in a Spanish-English e-mail exchange. *Language Learning & Technology*, *7* (2), 118-144. Retrieved September 24, 2004, from http://llt.msu.edu/ vol7num2/odowd/default.html

Opp-Beckman, L., & Kieffer, C. (2004). A collaborative model for online instruction in the teaching of language and culture. In S. Fotos & C. M. Browne (Eds.), *New perspectives on CALL for second language classrooms* (pp.225-251). Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc.

Park, B. (2003). Faculty adoption and utilization of Web-assisted instruction (WAI) in higher education: Structural equation modeling (SEM). Unpublished Ph.D. dissertation, The Florida State University, Tallahassee, Florida.

Pascarella, E. & Terenzini, P. (1998). Studying college students in the 21st century: Meeting new challenges. *Review of Higher Education, 21*, 151-165.

Pennington, M. C. (1999). Computer-aided pronunciation pedagogy: Promise, limitations, directions. *Computer Assisted Language Learning*, *12*(5), 427-440.

Reeder, K., Heift, T., Roche, J., Tabyanian, S., Schlickau, S. & Golz P. (2004). Toward a theory of e/valuation for second language learning media. In S. Fotos & C. M. Browne (Eds.), *New perspectives on CALL for second language classrooms* (pp.255-278). Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc.

Repman, J., Carlson, R. D., Downs, E. & Clark, K. (2000). Power Web searching techniques for teacher educators. In B. Gillan & K. McFerrin (Eds.), *Faculty development* (pp.492-495). (ERIC Document Reproduction Service No. ED444497).

Rogers, E. M. (1995). *Diffusion of innovations.* (4th ed.). New York: The Free Press.

Shih, Y-C. D. (2003). Online English language learning: A Texas-Taiwan connection. *Proceedings of the Eleventh International symposium on English Teaching/Fourth Pan-Asian Conference, Taipei, Taiwan*, 507-517.

Slobodina, T. (2000). Faculty development in technology for teachers of English for specific purposes (ESP). In B. Gillan & K. McFerrin (Eds.), *Faculty development* (pp.555-560). (ERIC Document Reproduction Service No. ED444497).

Smith, N. (2002, May/June). Teaching as coaching. *Educause Review,* 38-47.

Sugar, W. (2002). Applying human-centered design to technology integration: Three alternative technology perspectives. *Journal of Computing in Teacher Education, 19*(1), 12-17.

Susser, B. & Robb, T. N. (2004). Evaluation of ESL/EFL instructional Web sites. In S. Fotos & C. M. Browne (Eds.), *New perspectives on CALL for second language classrooms* (pp.279-296). Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc.

Terwindt, S. (2000). Constructivistic learning: Also for faculty! In B. Gillan & K. McFerrin (Eds.), *Faculty development* (pp.448-450). (ERIC Document Reproduction Service No. ED444497).

Thorne, S. L. (2003, May). Artifacts and cultures-of-use in intercultural communication. *Language Learning & Technology*, *7* (2), 38-67. Retrieved September 17, 2004, from http://llt.msu.edu/vol7num2/thorne/default.html

Toyoda, E. & Harrison, R. (2002, January). Categorization of text chat communication between learners and native speakers of Japanese. *Language Learning & Technology*, *6*(1), 82-99.

Verdugo, D. R. & Belmonte, I. A. (2007). Using digital stories to improve listening comprehension with Spanish young learners of English. *Language Learning & Technology*, 11(1), 87-101. Retrieved January 1, 2007 from http://llt.msu.edu/vol1num1/verdugo/default.html

Warschauer, M. (2000). The changing global economy and the future of English teaching. *TESOL Quarterly, 34*(3), 511-533.

Weasenforth, D., Biesenbach-Lucas, S. & Meloni, C. (2002, September). Realizing constructivist objectives through collaborative technologies: Threaded discussions. *Language Learning & Technology*, *6*(3), 58-86.

Yin, R. K. (2003). *Case study research: Design and methods* (3rd ed.). Thousand Oaks, California: SAGE Publications.

Zeng, K. (1999). *Dragon gate: Competitive examinations and their consequences.* London, UK: Cassell.

Zhao, Y. (2003). What teachers need to know about technology? : Framing the question. In Y. Zhao (Ed.), *What should teachers know about technology? : Perspectives and practices* (pp. 1-14). Greenwich, Connecticut: Information Age Publishing.

Appendix

The Interview Protocol

1. What kind of Web teaching activities do you use? Please describe your instructional use of the Internet?

2. What is your purpose of integrating the Internet into your instruction?

3. What motivates you in using the Internet in your instructional practices?

4. How do you see your role in the use of the Internet?

5. What are your feelings, views about using technology in your existing courses?

6. What are some limitations or barriers for integrating the Internet into instruction at the university? What are the barriers to implementation?

7. What kinds of support do you need or are you interested in? What types of assistance do teachers' need in order to begin implementation?

8. How do you view today's students relative to their comfort with and skills in using the Internet?

9. How do you incorporate students' skills in using technology in your instructional use of the Internet?

10. Please describe how you interact with other teachers in your unit regarding their use of the Internet in instructional uses?
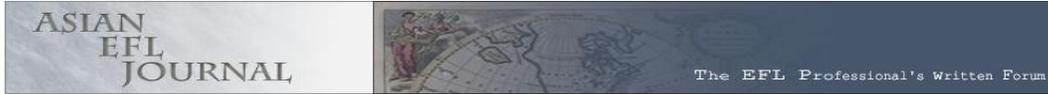
Unplanned Vocabulary Instruction in the Adult EFL Classroom

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Abstract

A large proportion of the direct vocabulary instruction an adult learner will receive in the EFL classroom will be unplanned (McDonald, 2006). Although unplanned vocabulary instruction can provide many of the conditions learning theorists recognise as being necessary for learning to take place, its spontaneous nature means it has certain limitations. The approach that guides such teaching will need to consider these limitations. As unplanned vocabulary instruction can mean diverting time away from the lesson aims, teachers must make difficult ad hoc decisions on how and when to dedicate time to such instances. This article aims to provide teachers with a loose framework to inform such decisions.

Keywords: Vocabulary, methodology, unplanned, instruction, framework

Introduction

Adults EFL learners often remark that they find the shear volume of unknown vocabulary daunting. Many say that they consider this vocabulary to be the largest barrier to communicating effectively in English. Despite teaching my learners independent

vocabulary study strategies, many still wish to receive more direct vocabulary instruction, in a classroom context. Although the limitations of direct vocabulary instruction are recognised (Nation, 2005) in an age of learner centred teaching it may be unwise for the teacher to ignore such requests. Furthermore these requests present opportunities to address genuine gaps in learner knowledge.

Although direct vocabulary instruction is often based on sound methodological principles, these principles are usually designed for planned vocabulary instruction. However the majority of vocabulary instruction in the class will be spontaneous and unplanned. Therefore to address the unique blend of idiosyncrasies and challenges that this type of instruction offers, the methodology employed will need adapting.

To teach unplanned vocabulary effectively the teacher may have to divert valuable time away from the main lesson aims. As this is not ideal, the teacher (or learners) should decide how much time to dedicate to each instance of unplanned vocabulary instruction based on criteria such as the utility and frequency of the word. Furthermore, due to the large degree of word knowledge necessary for productive use of a word, the appropriate level of word knowledge or 'intra-lexical factors' must be offered. How much time and how many factors required could be determined by how new the word is to the learner, or whether the vocabulary is destined for a productive of a receptive use.

Although 'unplanned vocabulary instruction' addresses many of the conditions learning theorists recognise as necessary for learning to take place, it is not without its limitations. These limitations should be recognised in order to appeal to a wide range of learning styles. Further measures will also be necessary to ensure recycling and to plan tests. By discussing the aforementioned issues this article attempts to construct a loose methodological framework, which can be used by teachers to guide their practices when giving unplanned vocabulary instruction in the adult EFL classroom.

Planned and unplanned vocabulary instruction

Recommendation 1: *Recognise that UVI in the classroom is important and treat it accordingly.*

Seal (as cited in Wei-Wei, 2003) has divided vocabulary instruction into two main approaches. These he describes as 'planned' and 'unplanned vocabulary instruction' (PVI and UVI respectively). PVI is understood as vocabulary the teacher knows will be taught before the class or before it is encountered. Conversely, UVI is the rest of the vocabulary the learner encounters within the class. This can be:

- Incidentally or accidentally learned vocabulary
- Words requested by the learners for explanation or expansion of meaning
- Words that the teacher becomes aware may need learner's attention drawn to

Most of the direct vocabulary instruction in the UK EFL classroom is unplanned (Brown, 1992; McDonald, 2006). No matter how much I plan my vocabulary instruction, I find requests for UVI are frequent occurrences in most classes. Often the success of an activity, or a grammar point, can depend on comprehension of key vocabulary. As The source of UVI and its spontaneity means it is distinct from PVI therefore it needs to be addressed differently by teachers. It is by recognising these differences that we can understand how to effectively teach UVI and adapt our methodology accordingly. Such considerations will better serve the learners' needs and increase the overall efficacy of direct vocabulary instruction in the classroom.

How to deal with UVI

Recommendation 2: Some vocabulary items will require longer than others to successfully convey meaning. This is especially true if L1 is unavailable. In such instances, and when time allows, consolidate new vocabulary with a productive activity.

Recognising the improvised nature of these impromptu teaching moments, Seal's (1991) ´**3C**´ method of dealing with UVI is very useful. The three **C**s refer to activities the teacher should conduct in order to facilitate learning. These are:

C1   Conveying of meaning (synonyms, anecdotes, mime, realia, explanation etc)
C2   Checking of meaning to confirm that learners have understood
C3   Consolidating meaning (practice activities in context)

Seal (as cited in Hatch and Brown, 1995) illustrates the 3C method by explaining the word 'boring':

C1 ─ Convey meaning

Teacher: When you go to the movies sometimes the movie is not very interesting, it makes you want to go to sleep. (T puts hand to mouth and yawns.) The movie is very boring. Or sometimes you have a teacher who speaks very slowly and who never makes you laugh and whose lessons make you go to sleep. The teacher is so boring.

C2 ─ Check meaning

Teacher: (To S1) Do you like boring teachers?

(To S2) Is this lesson boring?

(To S3) Is this book boring?

(To S4) Are you a boring person?

(To S5) Am I a boring teacher?

C3 ─ Consolidating meaning

Teacher: Turn to the person next to you and ask them if they had a boring weekend. If they say "yes," Find out why. (General hubbub) Now ask the person next to you what television shows they think are boring. (p.197)

Although useful, this is a very time consuming process. UVI can be impractical and unnecessary as some words simply require less teaching than others. Often a request for UVI may simply represent difficulty of retrieval, and not lack of understanding. During such instances consolidation may be unnecessary. Furthermore, in monolingual classes, if L1 is available, often a simple translation may suffice as conveyance. However, even with the aid of L1, checking of understanding and consolidation may still be necessary. This is especially true for new vocabulary, when such activities may aid memory and promote deeper processing of target language.

However, LI may not always be available to teachers, i.e. multilingual classes or monolingual teachers. Here other methods of 'conveyance' such as flashcards, or realia, will be invaluable, but these may be tricky to produce without planning. Nevertheless, if sufficient IT is provided (internet, Clipart, interactive white board, online dictionaries), simple vocabulary such as concrete nouns can be conveyed by the many images this technology provides. For more complex and abstract vocabulary such as: jealous, society, empathy; or for culturally bound concepts (democracy, toff, a lock in), images alone may not suffice. Here 'checking' and 'consolidation' become indispensable stages of teaching. Dictionary use, a practice I advocate strongly, can also dispense with the conveyance stage. However, focus on pronunciation and (depending on the word) consolidation may still be necessary for lower level classes.

Which words to focus on

> **Recommendation 3:** *When deciding how much time to allocate to each word, consider how useful it will be to the learner: prioritise words with greater learner utility.*

Obviously, word frequency is an important factor when considering how much time to dedicate to UVI. If a lexical item like ´Kith and Kin´ is requested for clarification, the teacher may rightly consider that due to the low occurrence of such an archaic phrase it does not merit much class time. Word lists like the General Service List or, depending on the teaching context, the Academic Word List, may provide the teacher with accurate frequency information on which to base such decisions. Indeed, with the advent of corpus linguistics, lists can be further divided into spoken and written English. However, consulting such lists may not be practical for the often impromptu situations that UVI presents; here the teacher should rely on intuition.

Moreover, frequency may not be the only factor to consider. A 'valuable' word should belong to one of four main categories, adapted from Schmitt (2000, p.142):

1.   Frequency – (prioritise high frequency over low frequency words)
2.   Technical words – (often low frequency but specific in use)

3.   Learner selected words – (UVI)

4.   Classroom words – (board rubber, exam, corrections, etc)

The value of a piece of vocabulary may be determined by its membership of one of these categories. Obviously the more categories a word belongs to the more useful it will be for the learner (Schmitt, 2000). Such information may assist teachers when deciding how much class time to dedicate to UVI.

Important information to convey in UVI

> *Recommendation 4:* *Always offer both oral presentation and written record of new vocabulary, as well as examples of use. If possible identify problem sounds that may aid pronunciation and word recognition.*

All words contain intrinsic properties that affect their learnability. These properties, which are related to a word's form and meaning, are defined by Laufer (1997) as 'intra-lexical factors'. It is generally agreed that in order to truly 'own' a word the learner must have knowledge of the following 'intra-lexical factors':

1. **Form** - spoken and written: that is pronunciation and spelling
2. **Word structure** - the basic free morpheme (or bound root morpheme) and the common derivations of the word and its inflections
3. **Syntactic pattern** of the word in a phrase or sentence
4. **Meaning** - referential (including multiplicity of meaning and metaphorical extensions of meaning); affective (the connotations of the word); and pragmatic (the situation of the word in a particular scenario)
5. **Lexical relations** of the word with other words, such as synonymy, antonymy, hyponymy
6. **Common collocations** (p. 126)

If the learner has access to many of these features, they can serve to disambiguate the target word. The provision of such detailed information, often called 'Rich instruction' or 'Rich scripting' (McWilliam, 1998) aims to provide a deeper understanding of a word, and make it an 'accessible vocabulary item' (Nation, 2001, p.95). However, common criticisms of rich instruction are that there are:

- Too many words to teach

- Too many features of a word to teach

- Other methods exist

- Teaching may not be the best way to assist vocabulary acquisition

- It consumes much of the lesson time (Adapted from Nation, 2001, p.95)

Although these criticisms have some validity, rich instruction can at least be seen to attempt to address the high level of word knowledge that many agree is necessary to really 'know a word'. Furthermore, I have found that simple teaching techniques can quickly facilitate access to many of these factors:

- Supplying a written record (**form**) including indication of word grammar i.e. (v), (n), (adj) etc

- Limiting phonemic transcription to problem sounds i.e., vowels, silent ´gh´ or ´kn´ , or main stress, can reduce time whilst addressing **pronunciation**

- Providing an example sentence can supply valuable **syntax** information

- Providing learners with access to ´good dictionaries´, and time to use them can empower the learner by allowing them to choose their own level of **rich instruction**

- Seal's 3C method addresses most of these factors and due to its versatility it can be extended or adapted to offer **collocations** or **lexical relations**

However, the use of such techniques will represent a choice by the teacher of 'how much time' they think the new vocabulary warrants: it may also raise the question of 'when?'

When to provide rich instruction

Recommendation 5: Gradually increase the level of rich instruction over various meetings. Avoid learning overload and cross association by limiting the level of rich instruction to manageable increments.

An important factor to consider when determining the level of 'rich instruction' is: how new is the word to the learner? Vocabulary learning can be seen as "a cumulative process where knowledge is built up over a series of varied meetings with the word" (Nation, 2005, p.2). This approach considers the likelihood of cross association: a phenomenon of confusion that occurs when learners are concurrently introduced to poorly known and semantically similar words (Schmitt, 2000, p.147). Therefore, during UVI the teacher should consider if the teaching of lexical sets (left and right, all the rooms of the house, synonyms) or offering numerous collocations is likely to aid or distract the learner. Furthermore the teacher must avoid 'learning overload', by not overburdening the learner with too much intra-lexical information at once. These considerations will necessitate the teacher revisiting UVI encountered lexis, in order to build up such knowledge incrementally.

Receptive vs. Productive Knowledge

Recommendation 6: Determine if the target language is destined for a receptive or a productive use when deciding how much time, or the level of rich instruction, to dedicate to its teaching.

Vocabulary knowledge should be looked at as a continuum between ability to make sense of a word, and ability to automatically access the word (Faerch et al, cited in Laufer, 1997, p.126). By viewing knowledge in these terms the common differentiation of 'active' and 'passive' or 'productive' and 'receptive' vocabulary can be seen to be simplistic in nature. However it is a distinction that still can be of great assistance to the teacher. It is recognised that 'productive' and 'receptive knowledge' (often linked to

ability to utilise in conjunction with the 'productive skills' i.e. writing and speaking or the 'receptive skills' i.e. listening and reading) require different levels of word knowledge (Nation, 2001; Schmitt, 2000). Speaking requires the greatest knowledge of a word's features (Nation, 2001) and the ideal of 'native speaker perfection' often requires mastery of all features (Laufer, 1997). Therefore, as the teaching of 'productive knowledge' is a more time consuming process, it is advisable that the learner only be burdened with such instruction when it is essential. When only receptive processes are necessary then the teaching of 'receptive knowledge' may be both sufficient and time effective (2001, p.24). However, as English is not a phonetic language, the teaching of pronunciation may be said to contribute to both production and recognition of a word and should therefore be addressed whenever convenient.

UVI vs. Lesson aims

Recommendation 7: If fully addressing UVI jeopardises the lesson aims, prioritise and act accordingly. However, do not be afraid to abandon nonessential lesson aims, if the need for UVI generates new and more relevant ones.

Brown (1992) suggests that a balance must be struck between the UVI occurrence and the success of an activity, meaning that the activity must not be sacrificed for UVI. However this may be an oversimplification and it should be the individual teacher or the learners who decide where time is best spent. Often UVI may present an opportunity for ´negotiation´ of new learning goals that are of more value to the learner than the originals. This 'jungle path' (Scrivener, 1994) method of teaching may appear daunting to the inexperienced teacher, but if used carefully it can provide relevant and interesting lessons that free the teacher from a dependence on published materials.

UVI and conditions for learning

UVI can be seen to facilitate many conditions which are thought to be necessary for language learning to occur.

Schema theory – According to lexico-semantic theory words are efficiently learnt by connecting them, in a sort of semantic map, to words that have already been learnt. As the differences in words become apparent, and the number of learnt words increases, the mind is forced to create intricate filing systems to place both old and new words. The design of these systems is thought to be informed by background knowledge or 'schema' (Schmitt, 1997, p.28). During PVI the teacher attempts to activate this schema through various teaching techniques; however, during UVI (and especially learner requested UVI) interest in the new lexis may already be generated. Especially during requests, the learner may already have activated, and be drawing on, their schematic knowledge: therefore providing the conditions necessary to locate the new vocabulary.

Context – Unlike much PVI, which is often decontextualized, UVI is normally situated in a context: be this an individual's private context or a shared, class generated context. Furthermore as UVI typically occurs during an activity such as listening, a grammar presentation, or a communication, often context is at the level of the text. This may provide opportunities for learners to engage in inductive reasoning processes or 'guessing from context'.

  Clark (as cited in Schmitt & McCarthy, 1997) suggests that two main types of context influence the learning in the following ways:

- Linguistic context, such as the ability of a learner to deduce rules of morphology or lexical occurrence, promotes comprehension.
- Extra linguistic context can further promote understanding by providing the learner with rich input through notions of culture, use of situations, gestures etc (p.28).

  The presence or absence of such clues can greatly affect the 'encyclopaedic knowledge' or 'schema' that is drawn on. As Schmitt (1997) states: "context is necessary to activate the full resources of word meaning" (p.28). Furthermore, practice activities, such as those suggested in Seal's 3C method, provide opportunities for learners to test hypotheses by attempting to place the new vocabulary into a communicative context.

Recommendation 7: Attempt to address all requests for UVI in some way to give learners a greater sense of ownership of the learning, and to keep them motivated.

Motivation and learner centred learning – It is generally accepted that motivation plays a key role in successful language learning (Lightbown and Spada, 1999; Little, 1991). The occurrences of UVI can be seen to represent the kind of 'learning centred' demands for instruction that are generated by learners' genuine 'gaps in knowledge'. The 'noticing' of such gaps are thought to provide optimum conditions for the intake of new language (Ellis, 1997). Furthermore, addressing learners needs (real or perceived) and requests for instruction, involves the learner in the decision making. Little (1991) says this provides a sense of ownership which can be positively motivating and thus aid learning.

Recommendation 8: Vary techniques of instruction when teaching UVI to appeal to a broader range of learning styles. Cater for learning styles not addressed by UVI, when planning consolidation or recycling activities.

Learning styles – It is well documented that many language classes cater for a narrow band of learning styles. This is especially true for UVI, due to an inability to plan an unplanned occurrence. As can be seen from **Table 1**, UVI, like traditional teaching, heavily favours the Lexical Verbal of Howard Gardener's learning styles (McKenzie, 1999) and completely excludes Musical and Naturalistic, where prior preparation of materials is essential. Even though individual learners comprise of many learning styles, the need for variety of teaching techniques is paramount to appeal to all types of learner. Moreover, the case for consolidation activities and recycling, where planning is often possible, is further fortified when one considers the difficulty of addressing all learning styles through UVI.

Table 1 showing techniques used for UVI and the learning styles they address

Word for description	Method of conveying meaning	VS	LV	ML	BK	MU	ITr	ITa	NT	EX
Wellington boots	Mime	X	X							
Wink	Facial expressions	X								
House	Draw on board	X								
Often	Draw a cline from *never* to *always* and include *often*	X								
Chase	Get learners to act out				X		X			
Paint the town red	Tell personal anecdote		X							X
Campaign	Get learners to deduce from context of text		X	X				X		
Window sill	Point to object	X								
Exploitation	Explain (with examples)		X							
Hope	Read out dictionary definition		X							
Put up with	Translate it		X							
Café	Show picture in book	X								
That'll be the day	Act out a short conversation		X							X
Disc	Learners who know explain to others who don't		X				X			
Catalogue	Learners look up in dictionaries		X		X			X		
Hostage	Create a story using model dolls				X					
Vase	Play a game (matching etc.)		X				X			
Give up the ghost	Tell a story which includes the words		X	X						
Reduction	Draw a diagram or graph.	X								

VS =Visual/ Spatial, **LV** = Linguistic/ Verbal, **ML**=Mathematical/Logical

BK = Bodily Kinesthetic **MU** = Musical **ITr** = Interpersonal,

ITa = Intrapersonal, **NT**= Naturalistic, **EX** = Existencial.

Source: Complied using, Scrivener, 1994; McKenzie, 1999; and Budden, 2005.

UVI and memory

Recommendation 9: *Keep a record of the UVI as it occurs to enable recycling and test writing, and review the new vocabulary before the end of the lesson. Encourage learners to record their new vocabulary, and if necessary, offer guidance on vocabulary books.*

Like all learning, vocabulary encountered through UVI is only of use if the learner can remember it. Schmitt (2000) claims that the highest risk of forgetting the target word occurs in the first 20 minutes. This suggests that learners could benefit from having their memories refreshed before end of the lesson. However, this practice does not necessarily have to be repetitive or de-motivating. A few basic techniques can breathe life into an essential teaching stage:

- **Productive use** – Learners can write stories, poems, dialogues, funny definitions, quizzes or presentations. They can discuss concepts, grade words, make own flash cards etc

- **Games** – Bingo, hot seat, miming, anagrams, hangman, missing word sentences, humming pronunciation, pelmanism, hyponym tennis etc

- **Vocabulary records –** Learners can be given time at the end of the lesson to transfer the new vocabulary to their own vocabulary books. Learners often require advice on how to layout and complete these records

- **Dictionaries –** Learners can be directed to 'good dictionaries' to, remove ambiguity, or choose their own level of rich instruction

Vocabulary should be revisited on multiple occasions, over ever increasing increments to better facilitate memory (Nation, 2001). However, there is often no guarantee that UVI vocabulary will be encountered again. Therefore, the teacher must keep records to plan recycling and to write tests. I have found that a simple list copied from the board at the end of the class and stored in the register is sufficient. However I have observed other teachers using equally effective learner managed methods such as vocabulary boxes or class vocabulary posters.

Implementing UVI in the classroom

Recommendation 10: Recognize that you they already engage in UVI and probably already adhere to many of the recommendations proposed herein. Reflect on practices and fine tune them to address UVI most effectively.

Whenever I speak to teachers about UVI, I often discover that the teacher perceives UVI to be a new and extra thing to include in their teaching. Fortunately for them, this is untrue, as most good teachers will already be responding to the ad hoc wants and needs of their adult EFL learners, within each lesson. Furthermore, although teachers claim to limit UVI in favour of lesson aims, in a recent study it was shown that teachers rarely refuse a request for UVI (McDonald, 2006). Moreover this study showed that teachers treat UVI like PVI, affording it a similar amount of time and using a similar amount of techniques to convey meaning. Although this shows that teachers do recognise the importance of UVI, it also shows that teachers are underestimating the characteristics that distinguish it from PVI, and thereby limiting the efficiency of their vocabulary instruction. By recognising the differences of UVI and PVI, and by adjusting their methodology accordingly, teachers can improve the overall quality of their direct vocabulary instruction.

Conclusion

Although direct instruction is not the most efficient method of learning vocabulary, it has an essential place in the classroom. As the majority of vocabulary instruction will consist of UVI, it is sensible to deal with this in an informed manner. Therefore a number of factors, such as frequency, the destined use of the new lexis and appropriate level of rich instruction must be considered before the teacher decides how much time to dedicate to UVI. UVI can offer the teacher opportunities to address the needs and the wants of the learners and so aid motivation.

Although UVI can provide many of the essential conditions necessary for language acquisition to take place, it is not with out its limitations. For this reason, the teacher should keep records of taught lexis in order to plan tests and recycling. Furthermore, UVI

addresses a narrow band of learning styles, which may be overcome by careful consolidation or communicative practice activities. Even though most teachers already practice UVI, some improvements may still be made by combining reflective practice with a UVI specific methodology. By using the recommendations herein, it is hoped that the teachers will continue to improve their UVI, and so increase the overall efficacy of direct vocabulary instruction in the adult EFL classroom.

References

Beck, I. L., McKeown, M. G. & Omanson, R. C. (1987). The effects and uses of diverse vocabulary instruction techniques. In M. McKeown and M. Curtis (Eds.), *The nature of vocabulary acquisition*, 147-163. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Brown, H. D. (1992). *Teaching by principles: An interactive approach to language pedagogy*. (2nd ed.). London: Pearson Education.

Budden, J. (2005). Multiple intelligences. British Council Online*, 14/02/2005.* Retrieved May 20, 2007 from http://www.teachingenglish.org.uk/think/methodology/intelligences.shtml

Ellis, R. (1997). *SLA research and language teaching*. Oxford: Oxford University Press.

Hatch, E. & Brown, C. (1995). *Vocabulary, semantics, and language education*. Cambridge: Cambridge University Press.

Hunt, A. & Belgar, D. (1998). Current research and practice in teaching vocabulary. *The Language Teacher Online 22.01*. Retrieved May 5, 2005 from http://langue.hyper.chubu.ac.jp/jalt/pub/tlt/98/jan/hunt.html

Laufer, B. (1997). What's in a word that makes it hard or easy: Some extra-lexical factors that affect the learning of words, In N. Schmitt and M. McCarthy (Eds.), *Vocabulary: Description, acquisition and pedagogy*. Cambridge: Cambridge University Press.

Lightbown, P. & Spada, N. (1999). *How languages are learned*. (2nd ed). Oxford: Oxford University Press.

Little, D. (1991). *Learner autonomy. 1: Definitions, issues and problems.* Dublin: Authentik

McDonald, C. (2006) *Teachers' espoused principles on vocabulary learning and how these relate to their treatment of planned and unplanned vocabulary instruction in the EFL classroom.* Unpublished masters thesis, Oxford Brookes University, Oxford, UK, Dept Westminster Institute of Education.

McKenzie, W. (1999). *It's not how smart you are it's how you are smart: Howard Gardner's theory of multiple intelligences,* Retrieved May 20, 2007 from http://surfaquarium.com/MI/overview.htm

McWilliam, N. (1998). *What′s in a word?: Vocabulary development in multilingual Classrooms*, Stoke on Trent: Trentham Books.

Nation, P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.

Nation, P. (2005). Teaching vocabulary. *Asian EFL Journal, 7*(3). Retrieved June 6, 2006 from http://www.asian-efl-journal.com/sept_05_pn.pdf

Schmitt, N. & McCarthy, M. (1997). *Vocabulary: Description, acquisition and pedagogy*, Cambridge: Cambridge University Press.

Schmitt, N. (2000). *Vocabulary in language teaching*. Cambridge: Cambridge University Press.

Scrivener, J. (1994). *Learning teaching: A guidebook for English language teachers*, London: Macmillan & Friends.

Wei-Wei, S. (2003). Current trends of vocabulary teaching and learning strategies for EFL Settings, *Feng Chia Journal of Humanities and Social Sciences, No.7*, 187-224. Nov. 2003.