Factors Hindering the Integration of CALL in a Tertiary Institution

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ABSTRACT

The field of Computer Assisted Language Learning (CALL) is a field that is constantly evolving as it is very much dependent on the advancement of computer technologies. With new technologies being invented almost every day, experts in the field are looking for ways to apply these new technologies in the language classroom. Despite that, teachers are said to be slow at adopting technology in their classrooms and language teachers, whether at schools or tertiary institutions, are no exception. This study attempts to investigate the factors that hinder ESL instructors at an institution of higher learning from integrating CALL in their lessons. Interviews were conducted with five ESL instructors and results revealed that factors which hinder them from integrating CALL in their teaching are universal factors such as knowledge in technology and pedagogy, computer facilities and resources, absence of exemplary integration of CALL, personal beliefs on language teaching, views on the role of a computers as teacher, and evaluation of learning outcomes.

Introduction

The advent of Information and Communication Technology (ICT) has affected all academic fields in many different ways that it is impossible for academicians and non-academicians to ignore its existence. Many educators, educational administrators and policy makers believe that the computer is making its way into becoming an integral part of the teaching and learning processes. What was once a topic to those with a special interest in computers has now become so widespread that have majority of teachers, be it at schools or higher institutions, must now begin to

think seriously about the implications of the computer for teaching and learning. Realizing that future human resources must be knowledgeable and skilled in ICT, the Malaysian Ministry of Education has identified ICT as one of the important factors which will help in achieving the aims of Educational Development for the years 2001 to 2010. Among institutions of higher learning the challenge brought about by technological advancement is overwhelming and higher education institutions need to prepare professionals who are competent in the design and use of current and emerging technologies.

Despite the rapid growth of technology, teachers have been slow in adopting this technology and "even slower to make productive use of it" (Gartton, 1998). Previous research suggests that reasons ranging from lack of teaching experience to lack of financial support have been given as to why teacher do not utilize computers (Mumtaz, 2000). Ginsberg & McCormack (1998), Bennet (1996), Miller & Olson (1995) reported that although many investigations on how computers are utilized in schools indicate that there have been many successes involving effective implementation of computer technology, the reality is rather dispassionate towards their usage. Surveys indicate that computers are not fulfilling their potential to effect significant changes in education, are under-utilized, and are not being implemented in very effective or creative ways. Though educators in general agree on the potential of computer technology to affect noteworthy changes in education, researchers indicate that more often than not the full potential of the computer is not exploited. Cox et al. (1999), and Passey and Samway (1997) reported that there have been slow uptakes of ICT in schools due to three main factors, that is the teacher himself, the school and the policy makers. An intervening question arises; does a similar situation exist in higher institutions of learning?

Acting as purveyors of knowledge and catalysts of change, tertiary level institutions aim at preparing professionals who are skilled in the design and employment of current and emerging technologies. Yet, to what extent are university faculties and staff, who are responsible for preparing future professionals, utilizing instructional technology in their own teaching? An informal oral survey by the researcher has uncovered that the integration or incorporation of computer-aided teaching and learning activities in university-level ESL courses has either been minimal or not practiced at all. This phenomenon is rather surprising given the fact that tertiary-level institutions have greater financial capacity and independence compared to schools. Thus, purchasing of hardware, software and courseware should involve fewer bureaucratic processes. Also, creating the previously mentioned items is more readily accessible

as the man and brain power available in higher institutions are within easy reach. In addition, some may assume that given the greater intellectual capacity and opportunities available in tertiary institutions, academicians are expected to be more "techno-savvy." According to the University of Melbourne's nine guiding principles in teaching and learning, the 8th principle states that 'state-of-the-art information resources and electronic learning technologies are central to the development of independent learners. It further states that the quality of learning technologies and resources is an indicator of the overall quality of a higher education learning environment. This stand taken by one of the top eight universities in Australia exemplifies the relevance of integrating technology in teaching in this new millennium.

The purpose of this qualitative inquiry is to discover the reasons why ESL lecturers or instructors of a Malaysian university decided not to integrate Computer Assisted Language Learning (CALL) in their teaching. At the moment, literature on factors preventing school teachers using technology in the classroom is quite extensive. On the other hand, similar enquiries on university academic personnel are rather limited especially in the Malaysian context. Thus, the two main research questions for this enquiry are:

1. What are the reasons behind ESL instructors' decision not to integrate CALL in their lessons?
2. What factors influence these decisions?

Reasons gathered from these instructors could help institutions of higher learning to access, decide and plan its ICT efforts as much has been said about how ICT is affecting and improving our lives.

Review of Literature

There have been a reasonable number of studies investigating the factors that prevent teachers from using technology. Evans-Andris (1995) found three styles of computing use among teachers: avoidance, integration and technical specialization with the prevalent style being unfortunately that of avoidance. The style that a teacher adopts affects their students' access to computer technology. Teachers who avoid either distanced themselves from computers completely or reduced the amount of time conducting computer-related activities. If they do conduct such activities, the interactions with students while they are working with computers

are very low. Shazia Mumtaz (2000) in her review of literature on factors affecting teachers' use of ICT summarized the following inhibitors preventing teachers from using technology: lack of confidence and teaching experience with ICT; lack of on-site support for teachers using technology; lack of help supervising children when using computers; lack of ICT specialist teachers to teach students computer skills; lack of computer ability, lack of time required to successfully integrate technology into the curriculum; lack of financial support.

In relation to the lack of confidence in using technology in the classroom several researchers such as Zamitt (1992), Winanns and Brown (1992), and George and Camarata (1996), have concluded that the teachers are less likely to use it because it threatens their sense of competence before their students.

Robertson et al. (1996) provided several broad-based themes of teachers' resistance to computer in the classroom as resistance to organizational change; resistance to outside intervention; time management problems; lack of support from the administration; teachers' perception; and personal and psychological factors. In relation to outside intervention, some teachers may resent having their behavior dictated by a higher authority and therefore refuse to use technology. One of the most prevalent accusation of teachers' failure to use technology is their resistance to change. Cuban (1993) provided reasons such as cultural beliefs about teaching, how learning occurs, what knowledge is proper in schools, and the student-teacher relationship as opposed to student-machine relationship to why new technologies have not changed schools as much as other organizations. Fullan (1991) provided an explanation why teachers resist change. Fullan (1991) says:

> *"...one of the most fundamental problems in education reform is that people do not have a clear and coherent sense of the reasons for educational change, what it is and how to proceed."*

At the tertiary level, the University of Minnesota in the year 2003 carried out a survey on its faculty members' experiences with educational technology. The survey revealed that the factor 'time required to learn about technology' topped the list as the most salient barriers to using digital technology in teaching while the second was the lack of online pedagogical knowledge, necessary technical skills, lack of money to fund initial course, development cost; time required to use technology in class; inadequate technical support; classroom projection problems; access to technology-enhanced classrooms; and lack of on-site support. All concerns

were reported by more than 47% of the faculty members surveyed (Jorn, et al., 2003).

Lee's (2000) review of literature classifies the barriers inhibiting the practice of CALL into four common categories: (1) financial barriers, (2) availability of computer hardware and software, (3) technical and theoretical knowledge, and (4) acceptance of the technology.

The cost of hardware, software, maintenance and staff development are the common factors contributing to the financial barriers of incorporating CALL as mentioned frequently in the literature. Tutunis (1991) discovered that some ESL teachers in Britain preferred conventional teaching aids to computers because they were not given enough time and financial assistance for self-development.

Closely connected to the financial barriers to using computers in the classroom is the availability of computer hardware and software. These two items are the most significant aspects of the computer as a teaching aid. Lam (2000) found that teachers may find locating a computer-equipped classroom an experience which can turn out to be 'a real hassle' and unnecessary. She further states that when teachers do not have access to software programs they then become unaware of the benefits of using computers. Leh (1995) discovered that even when American teachers indicated a positive attitudes towards the use of technology in the classroom, the use was minimal as access to computers was lacking paired with limited knowledge of technical know-how.

A lack of technical and theoretical knowledge is another barrier to the use of CALL. Lee (2000) claims that many instructors do not understand how to use new technologies. Lam (2000) discovered when teachers lack these two types of knowledge they are unable to see the benefits of computers in language teaching. One of Lam's subjects expressed her concern ahead how to communicate with the students while they are working at the computer. The lack of these two types of knowledge also contributes to the lack of confidence in the teachers' own computer skills. For a teacher who has no experience of computers it represents a great step ahead to get into them. One of Lam's subjects state that it was already stressful to use something new in a classroom and even more stressful if one doesn't know (how to use it). On the other hand, some teachers may have the technical knowledge however, the computer is perceived as a subject to be taught rather than as a tool to be used in teaching. This was an observation made by Pickard et al. (1994) while studying teachers in Hong Kong schools.

Another barrier to integrating CALL is the teacher's acceptance of technology. Warschauer, Turbee and Roberts (1996) state that some teachers may prefer the traditional role of the teacher as expert, thus implying that their discomfort with technology was perhaps more due to relinquishing their expert role than the lack of computer skills. In addition, misconceptions about the use of technology limit innovation and threaten teachers' job and security (Zuber-Skerritt, 1994). They resist being supplanted by machines. Some teachers can be suspicious to the claims on the effectiveness of technological innovations such as the computer as a legitimate educational tool because of the abundance of computer games, video games and films as entertainment (Albaugh, 1997). A slightly different perspective indicates that, some teachers may not be willing to integrate technology in their teaching because they are unwilling to make adjustments to their teaching practice.

Lam (2000) discovered another reason for not using computers was that the perception that computers could not adequately meet the students' needs. This perception can be legitimately explained by the software or courseware design itself, where it may be orally mechanical. In addition, the courseware may or may not be language rich enough or culturally biased, thus, not meeting with either their own objectives or that of the curriculum. In addition, she also discovered that linguistic difficulty of the materials could hinder its usage.

Debski and Gruba (1999) concluded a qualitative survey on seven English a Foreign Language (EFL) and ESL instructors at an Australian university on their attitudes towards project-based CALL (PBCALL). The PBCALL model stresses the ability of new technologies to enhance language learning based on team and individual activities that evolves around meaningful projects created by students and shared with world-wide audiences. The researchers discovered that the instructors in their study believed in of the tremendous power new technologies have to offer but, at the same time they foresee potential problems of integrating the computer into existing curricula. Additionally, they found that the instructors gave little indication that stand-alone applications could make learning more authentic and relevant to real-life experiences. All in all, the instructors involved in the study were amenable to the integration of PBCALL as an innovation to the curriculum. However, they were weary of the frustration engender by unreliable and unfriendly technologies. Some noted that their doubts of the new technology may stem from their inadequate knowledge of advanced technology. The researchers

concluded that instructors' attitude towards the new technology was pragmatic.

Overall, factors that affect the use of technology in the classroom gathered from many studies range from external factors such as access to hardware and software, the credibility of courseware, and professional development as well as internal factors such as awareness of the benefits of technology, confidence, technical and pedagogical knowledge, and personal attitudes towards technological innovations. The above mentioned reasons will serve as the underlying assumptions in this investigation into the factors hindering the integration of CALL among Malaysian university ESL instructors.

Computer Assisted Language Learning

> *"Recent years have shown an explosion of interest in using computers for language teaching and learning. A decade ago, the use of computers in the language classroom was of concern only to a small number of specialists. However, with the advent of multimedia computing and the Internet, the role of computers in language instruction has now become an important issue confronting large numbers of language teachers throughout the world" (Warschauer and Healey, 1998)".*

In the field of language teaching, the use of computers has existed since the 1960's. Throughout this approximately 40-year period Computer Assisted Language Learning can be divided into three main stages; behaviorist CALL, communicative CALL and integrative CALL. These stages differ in the levels of technology and certain underlying pedagogical theories. As computers become more affordable and manageable, the number of teachers using CALL has risen noticeably and numerous articles have been written about the role of technology in education in the 21st century. One of the contributing factors to this increase is the development of the Internet which has brought about a revolution in many teachers' perspectives. The teaching potential and tools of the Internet have gradually become more reliable and naturally more popular. Taking into considerations the findings from research and practice, this network-based technology can contribute significantly to language teaching and learning when appropriately implemented. Among reasons for integrating CALL includes (1) experiential learning that is learning by doing (2) motivation as computers are associated with fun and games

(3) enhanced student achievement when learning attitude and confidence improves (4) authentic materials for study (5) greater interaction through various medium and with various people (6) individualization supported by student-centered collaborative learning (6) Independence from a single source of information and (7) global understanding when communication is practiced at a global level (Lee, 2000).

The current integrative phase of CALL is marked by two very important developments in computer technology which are the multimedia computer and the Internet. Multimedia technology which is exemplified today by the CD-ROM allows the use of a variety of media such as text, graphic, sound, animation and video in the teaching and learning of a second or a foreign language. With hypermedia, which means that the multimedia resources are linked together and that learners can navigate their own path simply by pointing and clicking a mouse, enables the multimedia hardware and software to become even more powerful? The advantages that hypermedia bring to language learning are; first, by combining listening and seeing, authentic learning environment can be created; second, the variety of media allows the integration of the four language skills; third, the nature of hypermedia allows the learners to have control over their own learning in terms of pace and path; and finally, since hypermedia is non-linear in nature, students can focus both on content and form. This happens when linkages to grammatical and vocabulary explanations, exercises, quizzes and other augmenting features are created. With multimedia technology, the computer can act as a tutor to teach grammar, listening, pronunciation, reading, text construction, vocabulary, writing, and comprehensive skills.

The second technological advancement, the Internet, is making the greatest impact on language teaching. Internet facilities such as the World Wide Web and computer-mediated communication have opened up more opportunities for greater communication and authentic learning environment literally at the fingertips. Integration of all the skills, augmented by animations, video, and sound, into a single teaching material is now possible.

The World Wide Web can be used in a variety of ways such as for linguistics exercises, accessing authentic reading and listening materials, stimulation for communicative exercises and as a medium for publishing students' work. Providing access to real and international audiences the World Wide Web motivates learners to engage in producing and publishing their own language-based projects.

Computer-mediated communication tools allow learners to communicate with other learners or speakers of the target language inexpensively, easily and directly round the clock. Communication can be either asynchronous communication through electronic mail or synchronous communication known as real-time communication through the chat programs such MiRC, Yahoo or MSN Messenger or programs such as the Multi-User Dimension Object Oriented (MOO). With e-mail, teachers can set up pen pal or key pal projects for the students to communicate authentically with speakers of the target language on a variety of task-based topics and collaborative projects. Other asynchronous tools that can be used for authentic communication and writing assignments are the bulletin board, newsgroup and web-based conferencing systems.

Synchronous communication allows real-time authentic communication with other learners and speakers of the target language. In the United States, computer-assisted discussion is especially popular in ESL composition classes. Programs such as *Daedalus Interchange* allow students in a class to communicate with each other over local area networks. Students' share their composition with others and what follows are instant messages commenting or discussing each others' essays. Research by Chun (1994), Kelm (1992), Kern (1995), Sullivan and Pratt (1996), and Warschauer (1996) have discovered that computer-assisted communication are more balanced than face-to-face discussion as it is not dominated by the teacher's authority or by more vocal students. As text-based real time communication allows for planning, language used in this context is syntactically and lexically more complex.

Generally, integrating the computer in language teaching does assist in the language acquisition process. The degree to which it helps to make learners grasp the language is still in the process of discovery by many academicians.

Method

To gather factors that hinder the integration of CALL, semi-structured interviews were conducted in person by the researcher on five ESL instructors at a public university in the state of Selangor. The interviewing method was the core method of the enquiry as the researcher believes that it is a more effective medium to extract in-depth explanations on the issue at hand through cascading questioning. According to Patton (1990)

interviewing gives us access to things that cannot be directly observed such as feelings, thoughts, opinions and intentions. The interview sessions were audio-taped and transcribed verbatim by the researcher. Due to the constraint on the interviewees' time, the average duration of the interviews was 30 minutes. To answer the research questions, the researcher referred to a self-constructed interview guide. The questions were grouped into three categories. The first category of questions sought demographic and background information such as years of service, academic qualifications, and language skills taught. Questions grouped under the second category were constructed to discover information pertaining to interviewees' philosophy, approaches and beliefs in the second language learning process. Questions specifically related to technology in education and CALL made up the third category.

To gain more insights regarding the questions put forth in the study, a questionnaire was distributed to five other ESL instructors from the same institution. The first part of the questionnaire sought demographic information and the second part had two open-ended questions. The first question directly asked for factors hindering the integration of CALL in the respondents' language lessons. The second question asked whether the respondents would consider integrating CALL if circumstances permitted.

The Participants

The participants were five ESL instructors selected from two departments of the institution. For citation purposes they will be assigned the following pseudonyms; Maria, Sophia, Amy, Ramona and Zara. All have more than 10 years language teaching experience at the same institution. By being highly experienced in teaching ESL and having worked at the same institution for a reasonable number of years, it was more likely that the instructors would be able to provide credible and practical reasons hindering CALL integration. Another criterion for selection was, through past and current experience of working with the selected participants and hence the researcher had some knowledge of their teaching approaches and computer practice.

Profile of Participants

The interview participants were all females teaching ESL-related courses at the institution. Their teaching experiences range from 10 to 25 years

and all possess a Master's degree in either TESL or TESOL from local universities and universities abroad. They have taught all the language skills, including English for Specific Purposes, and Literature. Three of the interviewees are currently teaching a standardized examinable preparatory ESL course that partially determines entry into undergraduate programs at Australian universities. Two of them have had no formal training either at the undergraduate or post-graduate level in using technology for teaching. The other three had taken a course on technology and teaching, the content of which however, none could recall. All had attended short-term courses, seminars and demonstrations on using computer technology for administrative and teaching purposes.

The participants' knowledge of Information and Communication Technology (ICT) was deemed sufficient to function well in their vocation. ICT skills include utilizing application software such as word-processing and presentation software and utilizing Internet facilities such as retrieving information from the World Wide Web and corresponding through the electronic mail (e-mail). Usage of the computers is however, confined to preparation of teaching and assessment materials, sourcing of materials and correspondence with colleagues or former students. Attempts at using computer in the classroom have been very minimal and mainly aimed at making the students retrieve information from the Internet. Nevertheless, attitudes toward the computers are positive where all believe that the computer has facilitated their work tremendously, more so for some than the others. Due to the convenience of the Internet most of the instructors are not dependent on printed materials from the library. The belief that technology is now very important in their work and pertinent in education is shared by all five participants. Furthermore, all are willing to gain more knowledge in using the computer if time permits and if content of the training is relevant.

None of the participants believe in a single methodology in teaching a second language and all have expressed that they are eclectic in the language teaching approach. Students' level of proficiency, skills being taught, content of the course, the impractical, idealistic nature of an approach, students' learning preferences and personal beliefs in language teaching have been cited as reasons to why adhering to one approach is impractical.

Questionnaire Participants

The questionnaire was distributed to only five ESL instructors from one department of the institution. All were females and have 10 to 16 years

experience in teaching the various ESL skills. They possess a Master's degree and have not attempted at integrating Computer Assisted Language Learning in their lessons. Since there was only one open-ended question pertaining to factors hindering the integration of CALL, the analysis was focused on the responses to this question.

Results

Technical and Pedagogical Knowledge in CALL

A factor expressed by all five participants of the interview which appears to be a major factor hindering the integration of CALL in their lessons, is the inadequate technical and pedagogical knowledge they possess in this area. The lack of technical knowledge was expressed in specifically by only one participant who believed that it is necessary to have knowledge in operating and developing a software or courseware. On the other hand, she expressed that pedagogical knowledge can be developed naturally through experience:

> *"Pedagogical knowledge I feel would be very much common sense because I've been teaching for 25 years so I basically would be able to figure out the teaching strategies. The only thing I lack would be the technical part which is which button to press, what commands and what does what or goes where" (Maria).*

The other four instructors expressed that their knowledge in CALL is either minimal or non-existent. Their claims are supported by the member of training they have undergone in this area. Three of the participants have undergone a course in technology in language teaching but none could recall what was learnt. This is probably due to the fact that the course was taken a considerable number of years ago. One instructor said, "I wasn't even aware there was even a subject named CALL", (Amy). In addition, participation in short courses and even demonstrations was not sufficient or effective in making the instructor want to apply knowledge or information gained in their lessons. One respondent of the questionnaire stated that she lacked sufficient knowledge on how to utilize CALL for her drama class.

Lacking the technological and pedagogical know-how influences an instructor's confidence in employing computers in the classroom. In a

doubtful tone, Amy said, "I can use it, you know, for typing and all those but for teaching, I'm not too confident."

Computer Facilities and Resources

Another factor hindering the integration of CALL is the availability of computer hardware and courseware. On the issue of hardware, three interview participants and four questionnaire respondents expressed concerns such as the availability of the laboratory for usage, reliability of Internet connection, quality of computers, and the sufficient number of computers for each student's use. Zara's comment exemplifies a familiar problem concerning computer facilities:

> *"The main problem is our lab. It is not fully equipped and the server is always down…and then not all the computers can be used. They are all archaic"*

Related to the issue of availability of the laboratory is the issue of planning lessons as expressed by two instructors:

> *"Planning, you need to plan ahead. Sometimes, you may have planned in advance but you may not need that day. The lab has to be booked like three months in advance. And then there are not enough laboratories" (Sophia).*

> *"It's a logistic problem, like booking of rooms and there are enough computers. It is not easy if you want to use it now. You have to prepare in advance. You can use it tomorrow. You have to plan three months ago" (Ramona).*

The issue above is worsened by the unreliable connection, such as the sudden malfunction or the disconnection of the computer server. Added to that, is the breakdown of the desktop computers themselves which may hinder equal learning opportunities for each student in maximizing their learning experience as hinted by Amy, "I mean no point if three students have to share one computer". A respondent of the questionnaire stated that 'Breakdown (of computers and servers) hinder classes from going on. You still have to have alternative teaching methods if breakdowns occur." This statement extends the problem of planning as stated earlier by Sophia and Ramona.

The unavailability of CALL resources in the form of CD-ROMS is perceived as another problem in integrating technology in the language classroom as expressed by Zara, "Number one, do we have the CD-

ROMS in the very first place? Does the institution have the CD-ROMS?" Amplifying the problem is the compatibility of the courseware with the needs of the curriculum and the learners. Sophia foresees the improbability of any courseware that would cater to the curriculum she is currently teaching. Her opinion is shared by a respondent of the questionnaire who wrote:

> *"The syllabus designed doesn't permit or give space for integrating CALL. What I mean is that, students learn from given handouts and there are no suitable programs in soft copies to help the teaching process."*

Resources may be available in the market. However, knowledge of their availability and gaining access to them create another obstacle. Ramona added forth this problem… and sometimes the problem of getting software to teach a particular thing."

Exemplary Integration of CALL

Another hindering factor, which may be close linked to the limited knowledge in CALL, is the lack of actual exemplary integration of technology or success stories of using technology in the language classrooms by colleagues or proximal others. Two instructors share the view that if other teaching staff have experienced some degree of success in integrating technology or are very technologically inclined then the likelihood of trying out CALL is there:

> *'...if I see other teachers using it and successful, I might use it. If not I think too much effort to put in and I don't know the result. Not sure of the effectiveness' (Ramona)*
>
> *'I think I will be technologically inclined because the others are using it (Amy).*
>
> *'Colleagues using CALL? None that I know of' (Zara).*
>
> *'Don't think anybody here is using CALL. Nobody has mentioned it for a long time' (Ramona).*

Ramona added that the lack of exposure to technological integration was also lacking during her schooling and teacher training years:

> *"And then maybe I'm not exposed to it…my teachers haven't done it to me. I don't know how to do it actually. I mean they say*

to integrate, but you know they have never shown me how and I have not been trained…"

Personal Beliefs of Language Teaching

The instructors' beliefs or philosophy on how a second language should be taught, who influence their decisions on selection of the tools, materials and methods to be used to facilitate language acquisition is also a hindering factor. All five instructors held the belief that the presence of the human teacher is of utmost important in language teaching as he or she can provide the better interaction and training:

"Because so far to me, especially when I teach grammar or writing…I find that the interaction needs to be there, between the lecturer and the students. And I rather preserve this" (Amy).

Amy further suggested that the human teacher is able to provide better explanations:

"Because even…let's say I give printed materials for students to do and I find that they still have lots of problem, it still have to boil down to explanation and for them to explain to me what is it they misunderstood about it and for me to clarify the misunderstanding."

She also believes that teaching the productive skills does not necessitate the use of technology.

Maria believed that the learning of a language requires close guidance of the human teacher and frequent contact with him or her as she likens learning a language to learning to drive:

"I'm very interactive, I'm always talking to them and they always talking to me. I try to make them talk to me because I think teaching language is like driving a car. It's like you get a license but if you don't drive the car for what (what's the point). I always tell students it's like driving a car, the more you drive the better you become, a better driver. It's just like language"

She also added that the human teacher is a better teacher because he or she acts as a better role model for language acquisition:

"...you know, for language the teacher is the role model, the teacher, the lecturer, what ever, is the role model...role model of good language, in intonation, pronunciation and others…"

For young adult students who are learning a foreign language for the first time Ramona believes that they need to be given a lot of input from a native speaker. She believes immersion maximizes the acquisition process. As the person in charge of a preparatory program for students bound for Korean universities, she gave the following example:

> *"Like learning Korean, they don't rely on the computer. But in three months they can speak basic Korean and they can understand what the Korean teacher is speaking to them…in three months because of the human teacher"*

One respondent of the questionnaire believes that she is able to teach well even without the assistance of the computer. Maria's statement encapsulates all five instructors' belief, "I always think a good teacher can never be replaced by a computer no matter how good the software is."

Views on the Computer as the Teacher

The issue of the computer's ability to be an effective medium for language learning was also raised by the some of the instructors. Comments on this factor were gathered when the question on the success or failure of learning language online through an electronic distance learning program was posed. A concern over the ability of the computer to be a good language role model providing practice was expressed by Maria:

> *'No practice. We watch, we learn by mimicking, you know. It's is not only just language, so many other things. We learn when we watch others doing it. How can you expect the computer to succeed in that?'*

She further added:

> *"The good teacher can be a good role model, but if it is a bad teacher then a good computer is better. If it is a bad teacher then I would prefer the computer. If you're a good teacher nothing would beat you, but if you're a bad teacher, please, bad software 'pun tak pe' (is good enough)"*

Online learning programs utilize learning management software which include electronic and chat features for students to communicate with the instructors. Even with such a medium of communication being used in a language module, the instructors were doubtful that it would

enable learners to become proficient in certain areas especially the speaking skills as Zara comments:

> *"..because with the teacher you will learn pronunciation, speaking skills in real life interaction. But on the computer it is very artificial. And then it is just writing you know. They just write the response. With reading I doubt it. I think it will improve the writing but other skills I doubt it. You have to be in class. And then the interactions with classmates and not just the teachers you know."*

Although, learning language through the computer helps in achieving a certain level or perhaps minimal level of proficiency, it may not be able to teach other aspects of language. Ramona expressed this sentiment:

> *"They (students) will just get the basic (through online learning). They know the structure but not totally everything…because language is used differently, how can you bring that through the computer?"*

Sophia perceives that online learning is suitable for students who are already comfortable in the language. It would not help those who are less proficient. In addition, online learning may work with English for specific purposes where the content is more structured.

Skepticism over whether the computer was able to sustain interest was also raised. Maria expressed her doubt in the ability to continuously stimulate students to learn. Using a monotonous courseware may invite boredom into the learning process. A human teacher on the other hand is able to make several changes to sustain interest.

> *"They (students) will be bored very fast…they probably go through the whole lesson as it's new to them. Second lesson, third lesson I think that will be the end of it…because it is the same thing. Despite all the new things you can put in it is still a CD-ROM. It's the appeal. It will lose its appeal. I would say no matter what, they would rather listen to an interesting lecturer, a good teacher who has got good teaching strategies. Especially language, it is very dynamic. Proficiency is very hard to teach."*

Skepticism was also expressed in whether learning would take place when using computers. It is expected that this tool should provide extra learning. Maria expressed financial concern over whether the investment

involved in setting up laboratories and buying hardware could justify the returns in terms of added learning:

> *"So do you think CALL has an extra edge over any other tool that the students would learn something extra? And you are building a million dollar lab and the effect is practically the same? Have the students learnt? Worst case scenario learning did not occur."*

Evaluation of Learning Outcomes

One instructor stated that the exam-oriented nature of the curriculum which tends more towards getting good results rather than how the learning process was enhanced, hinders the integration of CALL in her lessons. Since students' success and teacher's effectiveness is measured from grades and the numbers obtained in addition to doubt in the effectiveness of CALL she sees minimal usage of using technological innovations in her teaching:

> *"Because I think at the end of the day…when it is assessment, it is still the students. They (management) still measure what they have learnt and they want to see results. So I think it is not your approach. You know, they want to whether they get an A…exam oriented…whether it was interesting, or you know whether beneficial, whatever they want to see is the A's" (Ramona).*

Testing Rival Explanation

A measure taken to validate the credibility of the findings was to select instructors who have made minimal to no attempts at integrating technology in the classroom. It was assumed that rival explanation that may emerge from this selection criterion is that the explanation given could stem from the negative or biased attitudes of the instructors against the computer. To detect whether such biasness existed, several questions aimed at ascertaining their computer usage, willingness to be computer-trained and views on the importance of technology were posed. All instructors as mentioned in the profile of the participants utilized the computer at varying degrees of usage and viewed that the computer as important in their job and to enhance students' learning. In addition, they are willing

to be trained in CALL if time permitted and the content was relevant. In short, those participants did not resist technology.

Discussion

The factors hindering the integration of CALL uncovered by this investigation is parallel to the underlying assumptions gathered from the literature review. The lack of pedagogical knowledge possibly coupled with limited technological knowledge is one reason these instructors made minimal to no attempt at integrating CALL. Studies by Lilard (1985), Summers (1990), and Wetzel (1992), have also collaborated this. This inadequacy of computer-related language learning can be the result of the teacher training program they had undergone either at the undergraduate or post-graduate level which may not have emphasized technology due to various reasons. Even if there was a course offered on technology and education, the lack of interest in this area could have prevented them from signing up for such a course. Those who have attended long-term or short-term courses pertaining to technology in education indicated that, the content or the instructor or the learning experience perhaps did not make enough impact on them to practise what they have learned and such factors could provide cues to any institution of higher learning that investment in in-service technology and teacher training support is pertinent if it wishes to be a player in the current ICT-based economy. For any teacher training unit, this factor is indicative that training linking technology and pedagogy has to be strong.

Closely linked to limited knowledge mentioned above is the lack of exemplary or success stories of CALL integration. These anecdotes can be obtained from related journals, seminars, conferences, and other media. Staman (1990 in Gilmore, 1998) found that lack of success stories contribute to faculty's willingness to integrate technology. However, it is felt that remote anecdotes may not be sufficient to influence integration to take place. Successful exemplars could possibly influence others to adapt or adopt if they happen within the close networks of colleagues and professional acquaintances. Instructors may need to learn on-hand how to model the use of technology in teaching and mentoring is one way to encourage usage. In such case, an institution's administrators' view of the importance of technology in education and its policy towards rigorous manifestation of technology in its teaching practices could very likely cause the integration of technology to take place. What could be

an outcome of having this policy and outlook is that the institution itself would be able to create its own success stories.

Another factor hindering the use of technology in foreign or second language courses is the lack of computer-related facilities. Insufficient computer laboratories coupled with inadequate number and quality of hardware and poor connectivity could prevent integration. These insufficiencies could dampen even the spirit of instructors who are enthusiastic about technology in education. Shiengold's and Hardley's (1990) survey of teachers who have successfully integrated computers into their teaching practices found that these teachers' access to hardware and resources were twice the average. This factor could be considered a serious problem which requires monetary solutions that are rather intricate.

The incompatibility of courseware with the objectives of the curriculum, the instructor's teaching strategies and the students' needs might also hinder integration. Unlike schools, tertiary institutions do not share a single standardized curriculum. Outsourcing a ready-made courseware which caters to the tertiary curriculum in its entirely is not an easy task. Rigid evaluation of the software and the courseware is essential especially on commercially-produced software where the pedagogical aspect is normally neglected.

Even if computer-related facilities are all in order, integrating the computer involves additional planning that is beyond instructors' normal planning practices (Myers and Halpin, 2002). In addition to their normal lesson preparation, instructors need to select the courseware and related activities. These require some duration of time. They then also need to consider whether both items will meet the learning objectives as prescribed by the curriculum. In addition, backup lessons need also to be drawn up in case of unforeseen technical problems. One will then begin to question whether the learning outcome will be worth the effort invested.

The teaching style, approach and beliefs an instructor embodies can very much influence his or her selection of teaching materials, activities and assessments. An instructors teaching beliefs help shape how lessons are organized and how instructional strategies are planned and executed. Pajares (1992) states, "educational beliefs of pre-service teachers play a pivotal role in their acquisition and interpretation of knowledge and subsequent teaching behavior". Helping to develop second or foreign language receptive and productive skills is not an easy task despite the claim made by some non-language educators who believe otherwise. Inculcating these skills in language learners require good teacher modeling, individualized guidance and consultations, elaborated feedback and

frequent interactions. Unless a computer can perform the roles of the multi-tasking human teacher, who is able to respond to various learning problems, the integration of the computer in a language class can be limited. Albion (1999) states that, "there is substantial evidence to suggest that, teachers' beliefs in their capacity to work effectively with technology are a significant factor in determining patterns of classroom computer use". Moseley's and Higgins' (1999) concept of Pedagogical Content Knowledge, which is defined as the blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organized, represented and adapted to the diverse interests and abilities of learners, and presented for instruction, is an important factor determining teachers' behaviors. 'How ICT fits into this model depends upon whether teachers see ICT as changing the nature of their subject and the way it is understood, or whether ICT is seen as a tool for teaching another artifact in the classroom'. What we actually need is a computer with intelligence parallel to that of the human teacher. To date, development of an artificial intelligent system in language teaching or Intelligent CALL has not made any revolutionary impact of which the researcher is aware of. This is due to complexities of knowledge in pedagogy, psychology, natural language processing among others involved in creating a language teaching machine.

The views or attitudes an instructor has in emerging the capabilities of the computer affect the degree of its integration in his or her lessons. Gressard and Loyd (1985) established that perceptions of the potential usefulness of computers can influence attitudes toward computers. In addition to the knowledge, these perceptions are shaped by experience with the computer or without the computer. When the accumulated experiences in traditional language teaching have not been assisted by the computer and has thus far proven to help in the acquisition of the learners' second language, the machine may not be viewed as being able to totally facilitate language learning. The computer could be viewed as dehumanizing as it lacks the human touch and at best its role is very supplemental. All these could subsequently influence the amount of computer integration that can happen. Even if the computer has been utilized to facilitate learning, counteractive experiences with the computer, such as those pertaining to time, content, facilities, may inform the instructor that its capabilities could still be limited to warrant total integration. Nevertheless, studies have shown that if training were given to teachers on how to use ICT for educational purposes, views on the computer might change (Christensen, 1998).

Conclusion

The findings of this investigation suggest that universal external factors and internal factors can hinder faculty members in integrating CALL in their language lessons. The external factors lie mostly in the practicality of utilizing the computer technology. It stems from problems in obtaining adequate hardware and software, logistics, time management, successful instances of integration, and sometimes the expectations of others in students' achievement at the end of the semester. Internal factors which influence instructors' decisions not to integrate technology originate from lack of training and exposure in the area and perceptions of the ability of the computer in matching what the human teacher can do.

If an institution of higher learning wishes to emphasize the use of ICT in its scholarship of teaching there are management issues that need to be resolved. Good networked infrastructure must be built, hardware must be purchased, software needs to be bought or developed and training must be relevant and effective. In addition, a change in the perceptions of computers for educational purposes must also take place. It should be advocated by individuals who are exemplars of technophiles and influential in getting to the hearts of the academic staff. The above list is of course not exhaustive, but if they are indeed acted upon successfully even the mindsets of the tenacious faculty members could be changed.

Computer Assisted Language Learning is an option teachers can choose from to augment their lessons in order to maximize language acquisition. Advances in computer technologies accord many possibilities of manifesting the growth in language education making the computer a worthwhile tool to explore in the classroom. Nevertheless, it must be added that not integrating the computer in the classroom does not in any way diminish the abilities of the language teacher or instructor.

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