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## **CALL TECHNOLOGIES: SURVEY RESPONSES CONCERNING UNIVERSITY AND SCHOOL SYSTEMS' RESPONSIBILITIES**

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### **Abstract**

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As Computer-Assisted Language Learning (CALL) technology gains greater popularity in the language learning community, it can play a critical role in the development of language proficiency for second language learners in our public schools. However, the current state of English learners' (EL) achievement status would suggest that CALL has minimally impacted EL students' language learning. This article, which summarizes information gained from an email survey and phone interview with EL teachers and school administrators concerning the use and availability of CALL technologies, highlights the roles and responsibilities of the universities and the public schools in providing the resources and training needed to effectively incorporate CALL technology into the instructional program to support EL students' language learning. This proactive approach will ensure that teachers have the access, time, and on-site support for the benefit of second language learners.

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### **Introduction**

English Learners' (EL) language proficiency is a national goal in the United States. With the implementation of No Child Left Behind Act of 2001 (NCLB, 2002), EL students are expected to reach the same standards indicated for all students. Roughly 4.6 million students in the United States are considered English Learners, and some states have a much higher number of students with English learning needs, such as California. There, EL learners make up 25% of the school population (approximately 1,600,000 students) and represent over 80 languages. A high concentration of EL students often is correlated to low performance. To raise EL students' academic performance, the language instruction to help EL students acquire language proficiency needs to be more effective.

The literature suggests that CALL can help in the development of language proficiency of the second language learners in our public schools (Amaral & Garrison, 2002; Lacina, 2004; Warschauer, Knowbel, & Stone, 2004). However, the widened gap between EL students and their counterparts would suggest that CALL has impacted EL students' language learning minimally. This paper summarizes an investigation of CALL technology use in the local schools

and discusses the role of the universities in incorporating technology training, specifically CALL software, into their courses to prepare teacher candidates to use technology in their classroom for the benefit of all students, but specifically to support EL students. We also provide suggestions for how school districts can create on-site support for their teachers with CALL technologies.

With this preliminary discussion we hope to generate long-term studies of the effect of incorporating CALL technologies into the university training programs and school systems to increase the academic achievement of students learning English as a second language.

### **Review of the Literature**

Several studies have examined the efficacy of CALL. Sun and Dong (2004) conducted a study on how multimedia assists English vocabulary learning in 7-year-old Chinese learners. They found that without the support of native language or scaffolding of learning, multimedia did not benefit young English learners. However, by having sentence-level translation and scaffolding provided, the participants' scores improved. Trogia (2004), in studying migrant EL students' use of multimedia software, found that by using computer software as a tool for language learning without teacher intervention, students failed to make progress. These studies emphasize the importance of teacher interaction with the technology to support student learning.

Zha, Kelly, Park, and Fitzgerald (2006) investigated the use of electronic discussion boards to increase the communicative competence of EL students. They found that this peer-mediated technology use could effectively address EL students' language needs. A study by Biesenbach-Lucas and Weasenforth (2001) investigated the use of technology to improve written language for non-native English speakers and found that the students using email for writing improvement did not demonstrate any improved written language ability at the same improvement level as was seen improved by using a word processing program. This supports the importance of interactive experiences to support language learning. Technology alone is not the most effective method.

In discussing the importance of teachers learning CALL technology skills in the context of their using it in their classrooms, Egbert, Paulus and Nakamichi (2002), recommend that teacher-education programs design CALL content based on what the candidates need to know to support their students. This implies that the universities have a relationship with the local school districts to understand how to best prepare the teachers to support student learning with technology. Nickova (2002) provides universities and schools with specific ideas on how to begin using CALL technologies to address learners' needs. As teachers work with technology, they gain the on-going knowledge and experience to become more effective in incorporating it (Hitchcock & Stahl, 2003). Male (2003) found that as teachers use technology and their students experience the benefits of technology, the teachers continue to incorporate technology. Further, according to Grabe and Grabe (2004) students who have the experience of successfully using technology to support their learning in one environment are more likely to be able to transfer that knowledge when needed in other classes.

### Survey Response Information

An email survey and telephone interview was conducted with teachers and administrators in 14 Northern California schools. The schools were selected based on their high EL student population and high poverty rate. The following questions were asked:

- How do you use computer technology with EL students?
- How effective is the computer technology in helping your EL students improve their language?
- What potential do you see in computer technology for the support of language instruction for your EL students?

These questions were posed to provide a basis for a discussion with teachers and administrators regarding the availability of CALL technologies with EL students. The responses revealed that most EL students are not using any technology to support their learning. The majority of the respondents indicated that the use of any multi-media technology is not at all common. Most teachers reported that the software programs that were available were for testing purposes only. In some schools computers were used for word processing, creating PowerPoints, and applying for financial aid for college; no CALL technology was available to support language development. More than half of the respondents stated that they viewed computer-assisted instruction as the least important to language development, whereas teacher and peer interactions are seen as most important. Over half of the teachers indicated that since the computers in their buildings were so old, interactive type of software programs would not work on them.

All the respondents agreed that they knew little about CALL technology, but are interested in learning what is available and seeing how it can be used to support language development. All concurred that some type of technology use is good for students and can be a good motivator to learn language. One principal reported that there is no money in the current budget for training opportunities so teachers of EL students in that school will not be receiving any CALL training. Other principals reported that since they are unaware of current developments in CALL technologies, it is difficult to make decisions regarding purchasing and training for use with students.

#### *Synthesis of Survey Responses*

Based on these responses, several conclusions are drawn. CALL technology is not yet widely utilized in public schools. It is clear that schools with high EL student population in high poverty communities do not typically have the CALL technology to advance language learning for students. Antiquated computers that require money, time and work to maintain, frustrate teachers in their efforts to incorporate technology to supplement their teaching. Gandara, Maxwell-Jolly, and Driscoll's (2005) research in a survey of EL teachers on their challenges in EL instruction, supports this finding of the resource constraints these schools are facing that impact their schools' technology use and teacher-training opportunities.

When new computers and software become available in these schools, school personnel will then need to acquire the knowledge base to appropriately use CALL technology. This

training then needs to be ongoing as new technologies develop. The survey also suggested that principals and teachers know CALL could be a great tool for EL instruction, but they do not have the competence to make it part of their students' learning. District technology plans need to include a budget for sustaining their computer hardware and needed upgrades, as well as ensure funds for building teachers' competence in integrating CALL technologies into their program. In addition, these findings suggest very specific roles and responsibilities for the universities and school districts to support teachers working with EL students.

### *Role of the University*

The Society for Technology in Education (ISTE, 2002) and the National Council for Accreditation of Teacher Education (1997) recommend that universities offering teacher education programs provide candidates sufficient opportunities to gain competence in using technology for the benefit of their students. Candidates clearly need more than one course exposing them to software such as CALL to gain competency. They need multiple opportunities to examine how they can effectively incorporate technology into their teaching.

In response to the information gained from the survey, we provide computers in our curriculum classes to ensure that teacher candidates at this university have exposure to CALL materials. While in class, candidates engage in instructional problem-solving types of activities using CALL technologies. This ensures that as they engage in instructional planning they are incorporating the technology that supports their students' learning. At the beginning of the semester, instructors define appropriate CALL technologies and the benefits for second language (L2) learners. For instance, the multimedia environment that actively engages the student with visuals and sounds allows the student to work in a risk-free environment with immediate feedback to support their learning, as well as the student's ability to negotiate their pace. Although teacher candidates work with many CALL technologies, *Team Up With Timo* and *Kidspiration* are highlighted in this paper as examples of how teacher candidates gain experience in using CALL technologies for the benefit of students.

Animated Speech Corporation's product, *Team Up with Timo*, is an effective CALL technology which uses a computer-animated tutor, allows students to see the movement of the mouth in pronouncing words, hear the correct pronunciation of words, record one's own voice, and provides immediate feedback for students. The software program, which offers pre- and post- assessments, also provides a report to provide the teacher with the information needed to make on-going program decisions. The assessment is part of a total assessment, meaning that the classroom teacher needs to attend to the student actually using what was learned in everyday conversation. Besides vocabulary programs and stories, *Team Up With Timo* also offers a program for teachers to create their own lessons for the computer-animated tutor. Having teacher candidates work with Timo in creating lessons for L2 learners while in class, enhances the probability that when they are the classroom teacher they will be thinking of how to incorporate this type of software into their instructional environment. Having experienced using this type of software helps the teacher focus on the interactions between students and the program to improve students' language use in addition to teacher and class activities.

Candidates also develop instructional plans for younger L2 learners using *Kidspiration*, which provides pictures, spoken words, and text within a visual organizer. Instructors emphasize the value of providing multimedia CALL software for students struggling to understand the language. These pre-service teachers discuss its benefits in promoting language development in

not just language arts classes, but also in science and social studies. As many of the teachers assumed more responsibility in their cooperating teachers' classrooms, they downloaded trial versions of the software to use during their practicum and shared how motivated and engaged their pupils were in focusing on the learning task. Other CALL technology curriculum experiences include creating PowerPoint talking books with animation, and using text-to-speech software such as *Kurzweil*.

CALL technologies continue to improve. In this university's program we discuss the importance of the teacher making decisions regarding implementation of CALL technology for their students, in addition to the value of CALL in providing the context students need in order to begin using the language in daily conversations. Teacher candidates share their enthusiasm about using CALL technologies, but their experiences in the local schools leave them frustrated because of the lack of functioning computers and appropriate software for students. We continue to use computer labs to ensure our candidates develop knowledge and competencies to incorporate the technology that best supports their students. In addition, we recommend that universities begin to provide trainers and workshops to local public school teachers for them to have the opportunity to work with CALL software and develop the knowledge and skills to incorporate technology into their teaching for English language learners.

### *Role of the Public School*

A suggestion for the public school systems is to include and monitor the development of CALL in district technology plans or any other district strategic planning. Like the teachers, school administrators need to examine CALL technologies as a part of their curriculum consideration for EL students. Action steps may include:

- Require professional development hours in CALL technologies
- Provide CALL related resources
- Provide mentoring for EL teachers as they use this technology
- Require technology competency in the evaluation of teachers.

Professional development hours spent in learning CALL technologies include exposing EL teachers to the advantages and variety of CALL software programs. Through this exploration teachers acquire the hands-on experience necessary to gain knowledge and skills in incorporating CALL into their planning and delivery of instruction. This opportunity allows them to learn about and evaluate various technologies, and discover the value in designing instruction based on their students' needs. Attending CALL technology demonstration workshops offers teachers the opportunity to see how this type of technology can support student language development. Successful professional development will require that the school district consider the learning needs of the EL teachers and provide for individual differences in the adoption of CALL into their teaching.

Resources should typically include the availability of fully-functional computers, video training materials, and appropriate CALL software programs. Specific video training materials allow the teachers to learn at their own pace when convenient to their work schedule. CALL software demonstrations are an invaluable on-going resource that provides up-to-date training to allow for teachers to understand and consider using in their own classrooms. By providing a fluid

module of training and resources, schools can be confident that they are creating a different path to teaching and learning through CALL. Schools can provide on-site mentoring which may include having a technologically competent staff member who can provide in-house assistance as needed. Since teachers need to be held accountable for technology competencies in order to effectively implement appropriate instruction, it is of value to include technology competency in teacher evaluations. This effort can create a momentum for in-house teacher networking for learning and teaching.

### **Conclusion**

In the past two decades, there have been many advances in CALL technology. As university faculty, we have had the opportunity to explore some excellent software with our candidates and are confident that CALL can make a big difference in the teaching and learning of EL students. As faculty see the importance of universities' efforts to make CALL technology available to teacher candidates, the teacher-education programs will break new ground in the way teachers are prepared to work with EL students. Universities must lead in the CALL cause, provide computer labs to build the ease and confidence of teachers in the use of CALL, and help instill the proper thinking in how to supplement their teaching with CALL technology. Based on the survey responses, it also appears that much instruction and training in CALL is needed in the schools. Like any school reforms, to bring CALL into EL classrooms and produce desired student outcome, the momentum must be initiated through district level leadership in CALL training and resources.

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