Chapter XXIV
Creating Supportive Environments for CALL Teacher Autonomy

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ABSTRACT

This chapter reports on a study undertaken on the impact of pedagogical and technological innovations in language teaching and language learning, with a special focus on creating online institutional environments to support teachers' autonomy in computer assisted language learning (CALL). This study took place at MUELC, a self-funded teaching institution that belongs to a network of Australian universities offering English Language Courses for Overseas Students (ELICOS). Significant expansion in student enrollments has resulted in programs across four locations with all language teachers involved in CALL delivery. Fostering and supporting teacher autonomy became the key premise for the creation of multifaceted in-house CALL support initiatives, one of them an online portal containing resources for teaching and learning as well as tools for reflection on practice and opportunities for professional development. Language teachers have been building this intranet portal site using the theoretical frameworks of practitioner-based inquiry and organizational change management. The evaluation of this study reflects the duality of the research aims; namely, the features of the developed product and the learning process of the teachers involved. This may be of value to other language institutions embarking on similar online projects.
INTRODUCTION

The research site is a university English language center established in 1988, initially with about 80 to 100 students. The first CALL classroom was fitted in 1992 with a CALL specialist employed to promote the value of computers in language learning. Since then, the center has been offering weekly language sessions in a computerized environment that aims to equip students with computer literacy and lifelong learning skills to assist them in diverse sociolinguistic contexts.

Increased student enrollment resulted in a serious shortage of specialist CALL teachers, ensuing a conscious decision to involve all language teachers in the delivery of CALL. In order to achieve consistency and quality of CALL delivery across programs, language teachers needed to be adequately prepared and supported. This was (and continues to be) achieved by removing barriers to using technology for teaching and, specifically, through organizational efforts supporting teacher autonomy. As a direct result of these activities, teachers’ attitudes to CALL have become more positive. CALL in-house training, support programs, and other means of removing barriers to teaching with technology have been a major contributing factor to this change (Chyllinski, 2005).

The current study has directly evolved from these organizational initiatives aimed at supporting teachers in CALL delivery and professional development. Due to continuous expansion, the center now operates on four campuses. This necessitated some of the support structures for CALL programs to become independent of their physical locations. The main project aim was thus to create a common space online that would centralize access to CALL materials, ensure consistency of information available to all campuses, and assist with professional development in CALL, thus supplementing current work practices. The other aim was to record all factors that influenced the instructional design process and record thoughts, feelings, actions, and behaviors of the research members. The qualitative, practitioner-based inquiry approach chosen for this study meant all these factors could be meaningfully interpreted.

BACKGROUND

There is a large number of acronyms and terms used to describe teaching and learning with new technologies. For this chapter, the term Computer Assisted Language Learning (CALL) was chosen, as it emphasizes “the whole range of possible roles the computer could play in language learning” (Levy, 1997, p. 82) and because this is the term by which computer-aided instruction is referred to at the language center in question.

The theoretical grounding and literature for this chapter focus on professional development in CALL informed by the fields of second language acquisition, adult learning theories, Information and Communication Technology in Education (ICTE), diffusion of innovation theory, and action research methodology. Figure 1 depicts this chapter’s focus, main knowledge fields, subthemes, and how they intertwine.

History of CALL with Some Insights to Teacher Professional Development

Warschauer and Healey (1998) identified three phases of CALL in their overview of the use of computers for language teaching in the last 30 years. They observed gradual but irregular transition from the behavioristic phase of CALL through to the communicative and, most recently, its integrative phase. An alternative and, we would like to argue, more encompassing attempt at the analysis of the history of CALL is provided by Stephen Bax in his paper titled CALL—Past, Present and Future (Bax, 2003). Rather than describing phases, Bax provides three approaches...
to CALL teaching; namely, restricted, open, and integrated. He argues that this helps to alleviate confusion with time periods and methodologies and allows for a better description of teaching and learning practices.

Leaving these discussions aside (not because they are unimportant but because analyzing them is beyond the scope of this chapter), the following section will briefly review developments in CALL with particular emphasis on language teachers and their professional relationship with computer technologies.

Initially, CALL was influenced by behaviorist theories of learning in the 1950s, with repetitive language exercises based on drill and practice courseware. During the 1960s and 1970s, mainframe computers were used, with computers being seen as a patient tutor able to give instantaneous feedback for repeated vocabulary drills, grammar exercises, and translations. These were relatively easy to program by early CALL software developers, as they utilized set instructional sequences. Each step required a learner response, followed by computer feedback (Ellis, 1997). Professional development for CALL teachers focused on computer operating skills, labeled by Jackson (1971) as the defect view because this development focused on helping teachers overcome deficiencies in their computing skills. This remedial type of professional development was mechanical and consisted of a singular event focusing on the use of the technique, whether it was appropriate from a pedagogical point of view or not.

According to Warschauer and Healey (1998), the introduction of microcomputers and, more importantly, the shift at the theoretical and pedagogical levels toward the communicative approach, allowed for the second phase of CALL to commence. Dissatisfied with behaviorism and realizing that learning was not just a stimulus-response reaction, researchers actively investigated other theoretical frameworks. The concept of individualistic
learning began influencing educational practice and gradually became the dominant learning theory of the time (Jones & Mercer, 1993). This concept had implications for software design and evaluation of computer-based classroom learning and created a problematic relationship between language learning theories and educational computer programs (Jones & Mercer, 1993). This significant pedagogical shift resulted in moving from the paradigm of an instructional approach toward a collaborative and facilitative approach. This move has been reflected in the terminology of the field: language instruction was now seen as language acquisition, and the term foreign language teaching and learning changed to second language acquisition (Krashen, 1982).

In CALL, skill practice was provided through courseware that offered language games, paced reading, and text reconstruction. These choices were giving learners numerous options, decision power, and interaction in discovering the correct answers. The previous view on computers as tutors was reconceptualized, with the computer being seen as a stimulus and a tool. Software was used to provoke discussion and critical thinking as well as to teach language aspects through the use of word processors and their features (Warschauer, 1996).

The previous defect approach to professional development of CALL teachers gradually lost its appeal since it emphasized the latest educational fads and prescriptive techniques concentrating on simple or behavioral aspects of teaching. Instead, the growth approach (Jackson, 1971) was observed more frequently. This approach recognizes that teachers are continuous learners who desire to solve instructional and organizational problems and wish to be involved in the decision-making processes.

The next historical phase of CALL was facilitated by advances in technological developments; namely, multimedia computers and the Internet. Numerous media (e.g., text, graphics, sound, animation, video) could now be accessed and used by the learner through the keyboard or the mouse, or by listening through headphones or speaking into a microphone. Authentic on-screen environments allowed application of all four macro skills within one activity while giving learners control over the pace and path of their learning. This was achieved through revising or skipping specific parts as desired and by managing the levels of difficulty. The main focus of instruction was not merely on the content and language forms but also increasingly on learning strategies. However, the quality of available programs, combined with technological limitations, prevented hypermedia having a significant effect on language learning (Warschauer & Healey, 1998).

In contrast, the expansion of electronic communication and the World Wide Web (WWW) in the late 1990s offered a cheaper, easier, and more convenient means for using language across all aspects of the curriculum. Initially, materials on the Internet were textbooks, grammar exercises, and collections of random activities. Using e-mail to share messages, documents, graphics, sounds, and video files offered other meaningful, authentic, and immediate language learning opportunities (Warschauer & Healey, 1998). Currently, the immediate access to authentic materials in the target language on the WWW (i.e., newspapers, radio broadcasts, podcasts) and opportunity for publication of texts and multimedia materials by learners (i.e., blogs, wikis, and digital storytelling) created by the Web 2.0 social software, facilitates an even more communicative approach to using CALL. No longer restrained by difficult and time-consuming authoring shells and the static, self-contained courses on CD-ROMs, language professionals increasingly use these new, user-friendly technologies in their teaching (Godwin-Jones, 2003).

Current technologies have opened up possibilities for creative development of language learning and teaching materials, thus enhancing and also necessitating increased teacher autonomy.
Supporting Teacher Autonomy Through an Online CALL Portal

As previously stated, MUELC is committed to CALL teacher support and provides a range of in-house initiatives in this area. These aim for teacher autonomy through structured professional development opportunities, provision of relevant teaching resources, flexibility in the choice of materials and methods, and opportunities for reflection on practice. In this study, the MUELC research team wanted to test whether providing all these support functions through an online portal was at all possible or desirable, and whether it would aid CALL teachers’ autonomy.

Research Aims and Questions

The key axiom, frequenting all practitioner-led inquiries is the identification of a problem emerging from the tension between research and practice (Dick, 1999). Similarly, the context of this research was not purely academic but also pragmatic. The aim was to involve teachers at the language center in creating a Web-based CALL teacher portal that would support teacher autonomy through professional development provisions, transparent access to resources, and reflection on CALL practice.

The overarching research question was “Can online portal support teacher autonomy in CALL?” with the following three lines of inquiry:

1. In what ways do teachers feel that the Web-based CALL teacher environment can assist them in their professional development in CALL?
2. Can access to resources, from the teacher’s point of view, be improved with this online environment?
3. Do teachers feel the need for professional discussion and collaboration in CALL? Would they reflect on their CALL practice using the new Web-based environment?

Research Methodology and Supporting Literature

The emphasis of this study was on instigating a process of positive change and on the recording of factors influencing the research and the research subjects. Most fitting for this purpose was action research, defined by Geoffrey Mills as follows:

[A]ny systematic inquiry conducted by teacher researchers to gather information about the ways that their particular school operates, how they teach, and how well their students learn. The information is gathered with the goals of gaining insight, developing reflective practice, effecting positive changes in the school environment and on educational practices in general, and improving student outcomes. (Mills, 2003, p.4)

Action-research, or practitioner-based inquiry, usually assumes participation and is occupationally relevant and responsive (Dick, 1999). Participation of the teaching staff was of significant importance during this project; team members were expected not only to use and evaluate an online environment but also to engage in its design right from the conceptual stage. Their active involvement had better potential to deliver a product that would meet CALL teachers’ needs. It was also hoped that a collaborative and collegial exchange of ideas would foster greater understanding of ICT in language education, thus contributing to teachers’ professional development. This intention was in line with the views of Moon (2000) on professional reflection as an effective learning tool for practitioners.
The choice of action research for this particular project was further supported by two other bodies of literature; namely, managing organizational change and instructional design.

The literature on managing change at educational institutions stresses the importance of staff involvement in the process of instigating change. Such involvement of colleagues increases the ownership, improves understanding of the process of change, and builds a critical mass of change agents (Eckel & Kezar, 2003).

The literature on instructional design strengthens this view and proves that in order for multimedia projects to be successful, collaboration should occur between experts of the content and experts of multimedia design (Clark & Mayer, 2002; Sinclair, Alfred & Smith, 2002). Researchers also advise against educational technology projects being totally dependent on individuals or a few impassioned professionals. Such projects are usually short-lived because they are not entrenched in the work culture of the place (Sheely, Veness & Rankine, 2001).

The design of the CALL Teacher Portal research was informed by a wide range of literature on Instructional Design Models (IDMs) and specifically by works of Andrews & Goodson (1991), Sims (2000), and Sheely, et al. (2001). Gustafson and Branch (2001) surveyed instructional development models and categorized them according to scope and purpose into Classroom Oriented Models, Product Oriented Models, and Systems Oriented Models. In accordance with their definition, the design of the CALL Portal is likely to fall into the Systems Oriented Models focusing on analysis of a large environment and assuming...
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Table 1. Research and action elements at various stages of the project

<table>
<thead>
<tr>
<th>Project Stages</th>
<th>Research Process → People (as researchers and adopters)</th>
<th>Action Product → Online Portal (as a learning environment)</th>
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<tbody>
<tr>
<td>Stage 1 Conceptualization</td>
<td>Who is involved?</td>
<td>What is its purpose/rationale?</td>
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<td></td>
<td>How do they work?</td>
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<td>What paradigm do they associate with?</td>
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<td></td>
<td>What is their educational context?</td>
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<td></td>
<td>What are their skills, knowledge, and theoretical framework?</td>
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<td>What do they want to achieve?</td>
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<td>Stage 2 Platform Design</td>
<td>Who are the users?</td>
<td>What will the interactivity constructs be?</td>
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<tr>
<td></td>
<td>What are their needs?</td>
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<tr>
<td></td>
<td>What is their IT context (expertise, access, and support)?</td>
<td>What media should be deployed?</td>
</tr>
<tr>
<td></td>
<td>What is their CALL context (expertise, access, and support)?</td>
<td>What is the publishing model?</td>
</tr>
<tr>
<td></td>
<td>What will the interactivity constructs be?</td>
<td>What are the quality assurance procedures?</td>
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<td>Stage 3 Project Evaluation</td>
<td>Do users feel the product meets their needs?</td>
<td>Is the product being used as intended?</td>
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a large scope. The articulation of such a model usually encompasses the process of theoretical conceptualization (Conceptual Stage/Analysis); the process of designing of a platform (Product Design/Prototype); the process of production, dissemination, and adoption (Development, Dissemination/Adoption); and finally, the process of evaluation.

These stages, according to Sims, rarely occur in a chronological manner. His dynamic I’D model (Interactive Instructional Influence Model) describes particularly well project management and quality control practices at MUELC (Sims, 1997).

An important element of the way the design of the CALL Teacher Portal was managed was the context analysis (added as an important ingredient of IDMs to the analysis stage by Tessmer and Richey in 1997). Focusing on context allowed us to analyze learner background, incentives, resources, organizational culture, and available group support.

The CALL Teacher intranet has been designed to provide for, among other functions, teachers’ professional development in CALL. Therefore, the quality of the interactivity constructs have been of significant importance to the project. Designing interactivity may seem to belong more to a world of computer games. However, it plays a prominent role in all instructional design environments. There is more to interactivity than just the physical interaction with software. Sims (2000) seconds Aldrich, Rogers and Scaife (1998) to move “the emphasis away from the level of physical interactivity at the interface (i.e. button pressing and mouse clicking) to a consideration of cognitive interactivity (i.e. learning activities which are supported when interacting with
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the software)” (p.331). Sims (2000) provides an in-depth analysis of interactivity through taxonomies and levels while defining four dimensions of interactive constructs: interactivity and learners, interactivity and content, interactivity and pedagogy; and interactivity and context. It is within those four dimensions that the interactivity constructs of the CALL Teacher intranet will be discussed later in this chapter.

Account of the Process and Data Summary

The Action Research Team consisted of six teaching English as a second or other language (TESOL) experts with various degrees of CALL experience and proficiency. The selection process was completely voluntary.

Data were gathered in several ways: detailed notes from the team meetings with verbatim quotes from participants, journal entries, questionnaires, and field documents (archived CALL reports and in-house publications). In keeping with action research approaches to data analysis, once data collection was complete, a theoretical framework was used to enable analysis and evaluation. All data were categorized and evaluated according to the conceptualization of the action research process in relation to teaching a language with ICT and teacher autonomy frameworks.

The research took six months in all, with the main part of the project having three distinctive stages: conceptual design, platform design, and project evaluation. On average, team members worked one hour a fortnight over four months on the main research component. There were nine meetings in all. The purpose of these meetings was to set an action plan and decide on priorities, read excerpts of relevant literature and discuss its understanding, explore thoughts and feelings as reflected in the journals, and review the data gathered from previous meetings to clarify accuracy if necessary.

The main characteristics of action research are, as its name suggests, action and research (Dick, 1999). The action aspect of this research was to create an online environment that empowers CALL teachers, while the research aspect was to instigate and evaluate the learning process and to reflect on practice with a view of professional and organizational growth.

During the first stage of the project (Conceptualization), the team engaged in discussion of research background, context, and aims, while reflecting on their reasons for joining the action research group. Responses revealed that all team members regarded this as an opportunity for professional development and wanted to make a contribution and be part of positive change, believing in research as a way of implementing new ideas.

Reading of Patton’s Common Principles Undergirding Qualitative Inquiry and Humanistic Values ensured common understanding of qualitative methods of action research and, particularly, understanding the idea of process use (the process as important as the outcome) as opposed to findings use, the former being of a greater learning value to the process participants and to the program being developed (Patton, 2002).

The focus then moved to defining types, or categories, of CALL teachers in the language center and specifying their respective needs in order to become autonomous. The distinction was based on teachers’ CALL experience and skills (Novices, In-Transition, Experienced/Confident, Power Users), attitudes to CALL (Luddite or Debutante, Chrysalis, or Explorer), and mode of employment, which intertwined with time and access factors (Sessionals, Contract, Emergency Teachers, Part-Time, and Full-Time).

During Stage 2 of the project, the Platform Design stage, needs for each CALL teachers’ category were prioritized and the issue of a model design considered through questions such as “Can or should the online portal meet these particular...
needs and how, and what functions should it fulfill? The list of desired functions and items for inclusion was then matched against the aims of the research. Then, the team reflected on the discrepancies between the project aims and the proposed project’s design thus far. The exercise revealed that the collaborative and reflective functions of the intranet portal had not been sufficiently addressed by the team. The general discussion that followed aimed to ascertain if teachers regard collaboration in teaching and teaching CALL in particular as important.

Finally, teachers had input into the proposed site structure, learning some basic principles governing Web design and usability issues (Krug, 2000). The team members also took part in a hands-on session on the functions of the discussion board settings and blogs, which for some was the first encounter with online collaborative environments.

During the final, evaluation stage of the project, participants were asked what they judged as measures of success and/or failure in assessing both the product and the professional development benefits of the project. Finally, the future of the CALL intranet portal was contemplated and the recommendation for further evaluation and development discussed.

**DISCUSSION**

The two-step process of a final evaluation reflected the duality of the research aims; namely, the learning process of the teachers involved and the features of the developed product. The next section of this chapter aims to ascertain whether subjects of this study felt participation in the research developed them professionally as hypothesized and whether the designed product was indeed perceived as supporting teachers’ autonomy in CALL.

**The Teachers**

Providing for CALL teacher autonomy was a principal theoretical concept behind the design of the CALL teacher portal. Team discussions on autonomy during the first stage of the project found teacher autonomy important, though difficult to achieve, and perhaps in some circumstances not entirely desirable:

- “it is essential for teacher satisfaction” (Participant B)
- “essential in our environment, due to variability in course structure and programs” (Participant F)
- “too much autonomy may not be desirable to teachers with no CALL experience” (Participant C)
- “not all teachers want CALL autonomy (in particular novices, those not confident)” (Participant D)

These discussions led to specifying needs of CALL teachers according to their position on the path to full autonomy. Members agreed that the needs of novices and in-transition teachers were quite similar, these needs being immediate, highly specific, and of a survivalist nature. Without trying to patronize, the team felt these teachers needed to be closely guided through lesson plans for technically uncomplicated CALL classes. These lesson plans “should not only explain what to do, but also how to do it” (Participant E) to ensure the greatest possibility for success, thus boosting the confidence of a novice teacher. Providing access to technical information, a ready-made list of logins and passwords, instructions on the use of CD-ROMS and other resources were also seen as paramount. The need for access to CALL theories and research was ranked low on the list of priorities, although the need for explaining differences between CALL and non-CALL language classes was seen as important.
There was also a consensus that meeting the needs of novices and in-transition CALL teachers would simultaneously meet the needs of a much wider group: emergency teachers, teachers with limited access to technology, and those new to the center.

The needs of the Experienced/Confident and Power Users (i.e., professionals specializing in CALL) were not seen as a priority by the team: “It is not relevant to them” (Participant C), “they are already autonomous” (Participant A), “they are power users” (Participant C). This issue was revisited when the Power Users voiced their hope for their needs to also be considered in the project.

When the issue of the missing collaboration and reflective functions in the design of the CALL intranet portal surfaced, we probed into their importance to the research participants. Some observations made on this issue included:

• “it is important especially in technology applications” (Participant A)
• “I believe in collaboration” as it “enriches our teaching but doesn’t preclude individualization and autonomy” (Participant B)
• “is essential to understanding of both relative and absolute values” (Participant C)
• “increases both variety and cohesiveness of teaching” (Participant D)
• “broadens ones own outlook,” supports “learning from others” (Participant E)
• “reflection on practice brings the biggest benefits” (Participant F)
• collaboration in CALL is “more important than other areas of language teaching because there is more to know and the knowledge base is expanding exponentially” (Participant F)

The collaboration function, it was therefore decided, should be an integral part of the portal and would take a form of either an asynchronous discussion board or reflective blogs. After learning more about Web usability principles and in order to ensure consistency of layout, the team decided to adopt the global university template as the template for the CALL portal.

Finally, issues of quality control and proofreading led to major decisions that all student handouts should be produced using a special template and that an editorial panel for the project should be formed to decide on priorities for further developments, to proofread the texts, and to assist with recordkeeping.

The Product

The process of conceptualizing and analyzing the unique needs and circumstances of CALL teachers at MUELC resulted in a development of a prototype that avoids lock-step and linear progression and allows for the model to be adapted for a variety of CALL programs, to be able to expand as new resources become available, and to be developed further when the context analysis prompts such a necessity.

The CALL teacher intranet model also borrows on the cognitive apprenticeship theme, reflecting situated cognition theory and adhering to a number of its principles (Anderson, 2000). First, it aimed at presenting knowledge in an authentic context; namely, settings and applications that would normally involve that knowledge. Second, it provided modeling and explanation on the how and why of the learning process. Third, it encouraged learning through social interaction and collaboration. In addition, it was hoped that the environment would gradually reduce assistance in favor of encouraging independent performance (Vygotsky, 1978). Finally, it aimed to provide opportunities for reflection where tacit knowledge becomes more explicit, helping teachers to analyze their performance and making the computer a cognitive tool (Lajoie, 2000).

One of the aims of this research was to build an online environment that would enable teacher autonomy in CALL. To facilitate this goal, this
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online site was to perform three main functions: provide easier access to resources, professional development opportunities, and reflection on practice. This initial conceptualization of the core intranet portal areas might suggest that they form discrete elements of the site, accessed perhaps through distinctively separate points of entry. However, in the design developed by the team, this is not the case. The intranet portal was created within the learning theory of constructivism, and so it is ultimately its users who determine what role each design element plays in the process of their learning.

The resources area, for example, can be accessed as a separate entity, giving an overview as well as details of digital resources (CD-ROMs and online) available to CALL teachers (see Figure 3). However, it can also be accessed through the Lesson Bank area, where specific lesson-related resources are discussed. The Lesson Bank itself can be considered a resource, but it can also function as a professional development tool through the provision of lesson exemplars and models.

Similar blurring of function boundaries applies to the reflection on practice area, as professional reflection can now occur in many ways. Teachers may reflect on their methodology by analyzing lessons submitted to the lesson bank, by reading publications on CALL theories, and by collaborating through internal and external discussion boards.

Sims (2000) defines four dimensions of interactive constructs: learners, content, pedagogy, and context. He advises instructional designers to analyze these interactive constructs in detail in order to ascertain how effective the user-software interactions (and therefore the learning process) might be. Looking at the CALL intranet portal through these lenses provides a number of observations: first, that the platform was designed with the explicit underlying philosophical and pedagogical concept (teacher autonomy), and therefore, its content elements and the media used were selected to serve that purpose; second, that the underlying pedagogy is based on a constructivist learner model, and therefore, the...
resulting design allows for the learning focus to change for different users; and third, we can observe that the design caters to different users because its interactive constructs are a function of the stage at which teachers (as learners) find themselves (e.g., Novice, Explorer, Power User and/or Emergency, Sessional, Full-Time/Part-Time). This also determines the when and where of the learning process, the contextual elements of the intranet.

If analyzed in the context of diffusion theories (Rogers, 1995; Surry, 1997), the product displays four attributes that increase its likelihood of success. First, it has been designed and trialed on a limited basis, with the opportunity for improvement before the product reaches a wider group of users. Second, it has an advantage over the status quo by providing more flexible access to CALL resources, professional development, and discussion completely independent of time and place. Third, the system is not overly complex and caters to any level of CALL expertise. Finally, it is compatible with existing practices and values; namely, current Second Language Acquisition theories, CALL pedagogy, and CALL professional development practices at the language center, which greatly enhances its prospects for wider adoption.

The following section should be viewed as a commentary on screen captures of various areas of the intranet CALL portal. The first to be shown there is the resources area, which contains a description of in-house digital resources and examples of their applications in CALL classes (see Figures 4 and 5).

The second area, the professional development area of the portal, contains tutorials on various aspects of teaching languages with ICT tools such as word processing, animated presentations, electronic publishing, and electronic communication. These tutorials are accompanied by examples of linguistic applications and teacher-developed classwork materials that utilized these tools. Figures 6 and 7 provide sample pages from the professional development area, titled *Teaching English with a Word Processor*, and one of its subtopics, *Dragging*.

To cater to novice CALL teachers, a lesson bank for all programs and levels was established. It is a steadily growing area of the intranet portal, where all contributing teachers are acknowledged. It contains handouts for students with step-by-
step instructions and additional resources for the teacher. The lessons are technically uncomplicated and do not require multitasking (see Figure 8).

The CALL Teacher Portal, as was previously explained, also enables teachers to access both in-house and external communities of practice, and to set up and maintain their own blogs for reflection on practice. Figure 9 depicts an example of the page encouraging exploration of an online discussion board (Nicenet.org).

EVALUATION

At the first meeting, members stated that the main reasons for joining the action research team was their willingness to contribute to the process of change and willingness to learn more about CALL. Their comments during the final stages of the research confirmed their satisfaction in achieving both of these goals. When asked if the involvement in the action research process met their expectations, they provided comments such as the following:

- “Yes, because (i) I feel I had input into the final prototype, (ii) I learned about how to design/ implement a project in a CALL environment, and (iii) I expanded my theoretical basis of understanding in this field” (Participant A).
- “Insofar as I expected that there would be a tangible outcome—the intranet—and that it would be a collaborative process” (Participant E).
- “Yes, I am aware more about the process and the product” (Participant D).
- “I wasn’t sure of what to expect at first—I thought we were going to ‘put things on the intranet,’ but I was happy to be involved in the ‘how’ rather than the ‘what’” (Participant C).
Figure 6. One example from the “professional development” area: “Teaching English with word processor” (© 2008 Monash College Pty Ltd., used with permission)

Figure 7. “Teaching with word processor”: Example of a “dragging” exercise supplied (© 2008 Monash College Pty Ltd., used with permission)

Put this story in the right order by dragging the sentences.

She put the spare tyre on. She took off the flat tyre. She stopped the car. Michelle thought she had a flat tyre. She opened the boot and took out the spare. She put the flat tyre in the boot. She closed the boot. Michelle drove away.
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The participants commented on their increased awareness of the complexities behind developing a worthwhile instructional design environment, especially one that aims to cater to a range of user types. Some team members found it beneficial to learn about action research methodology and to extend their knowledge of Web design principles.

All teachers found the most rewarding aspects of their involvement to be the team approach to the research and to the portal design process. They appreciated the fact that many points of view were expressed and taken into account, which resulted in a comprehensive needs analysis and, it can be inferred, a superior product. Some comments on this issue were the following:

- “Views and opinions of all people involved at the various stages were represented and responded by the researcher. It was a committee, and the ‘chairperson’ was in charge, but in a good way—kept us on track and took on board design changes, and so forth” (Participant C).
The strength of this process was “team and the task orientation” (Participant E).

The strength of this process was "teamwork and great direction and super well-structured (i.e., we knew exactly what was required and no pressure given)” (Participant D).

The main weakness, as the team repeatedly stated, was the difficulty in arranging team meetings and time allowance:

- “How to ensure team members all had enough exposure prior to each meeting to contribute and how much time was available for team members to experiment between meetings in a class environment” (Participant D).
- “Not everyone is able to put in time commitment as required (time factors)” (Participant E).
- “Time for group meetings” (Participant A).

These findings confirm the common knowledge of time-pressures and their effect on teachers’ professional development. Results highlight the tension between the necessity for thoroughness and adherence to the required stages (analysis, product design, dissemination/adopton, and evaluation) and the need to maintain interest and momentum to deliver tangible outcomes within a reasonable time frame.

The teachers saw this research as a “goal-oriented, cohesive and targeted” process (Participant B), which resulted in a “tangible gain” (Participant D) and was “a rewarding and productive experience” (Participant A). They all believed that the project achieved its aims and catered to their needs as CALL teachers. In relation to the three fundamentals of teacher autonomy (i.e., knowledge, choice, and reflection), they felt that the self-designed intranet portal holds the potential to support them in professional development, in selecting teaching materials and resources, as well as in sharing experiences and on reflecting on CALL practice.

At the time of evaluation, the system had been in place for only a few weeks. Not surprisingly, when asked to establish measures of project success, team members initially thought of an external evaluation; that is, an evaluation achieved through another study and conducted with a group of teachers not involved in the intranet portal design. This was beyond the scope of the research.

Figure 9. Invitation to join teacher discussion board on Nicenet (© 2008 Monash College Pty Ltd., used with permission)
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in question and would certainly require another research cycle.

There are at least three other strong indicators suggesting this process was successful in implementing positive organizational change. The first indicator is the product, the intranet portal itself, and its superiority when compared to earlier environments created without teachers’ input and accompanying research. The second is the members’ clear interest in the future developments of the intranet portal and their ongoing willingness to contribute to the process as a means of keeping abreast of its changes, adoption rate, usefulness, and relevance in promoting teacher and student independence. All members voiced that the action research process should be an integral part of further intranet portal developments, and most expressed their interest in maintaining their involvement, although with a lesser degree of engagement or under a condition of time release. This last caveat is symptomatic of the professional development program’s intensity if conducted in the way it was and considering its impact on teachers’ busy schedules.

The third indicator of success is the grassroots aspect: the upward direction of this change, the voice and strength it gives to the efforts for improvement. This is no longer the voice of a lonely impassioned individual, but rather the voice of a team of language teachers interested in their professional development with the goal of improving the learning experience of their students.

SUMMARY

The analysis of the evaluation feedback is very encouraging, proving that the intranet portal has fulfilled its professional development aims by providing relevant and immediate, just-in-time training opportunities (McKenzie, 2001).

The research process and the product of this research were equally important, and both achieved or have the potential to achieve tangible professional development outcomes for MUELC teachers. These outcomes include increased awareness of CALL principles; better understanding of teacher autonomy in light of second-language acquisition theories; greater acceptance of action research methodology as a method for professional reflection; and finally, improved appreciation of research processes required for collaborative development of instructional design environments.

This study corroborated the findings of other proponents of action research who have stressed the relevancy, active participation in the learning process, knowledge focus, and collegial support as most effective for professional development (Borko, 2004).

The project’s predicted future developments are collaborative material development, raising teacher awareness, a review, an external evaluation, and adapting the model to other programs at MUELC. The process of evolution, according to the team, should continue for as long as it will be required and for as long as it will serve its purpose.

CONCLUSION AND FUTURE TRENDS

The promise of CALL—the utilization of computers for teaching or enhancing second-language acquisition—remains largely unfulfilled. Barriers are the technical problems and the limited capabilities of computers, which still lag behind the way language teachers and learners would like them to perform, and administrative constraints (Felix, 2003). Issues to do with the role of the teacher in CALL, effects of the technology on the methodology, integration, and evaluation, remain central (Levy 1997).

The previous lack of consensus on second-language acquisition (Nulman, 1996) is bridged by the re-emergence of the eclectic approach (Mellow, 2002) and the incorporation of cultural dimensions (Liddicoat, Papademetre, Scarino &
Despite epistemological differences, language specialists agree on the most basic principles or conditions under which language instruction should take place: students should be exposed to rich language and cultural input, have authentic opportunities to interact, and be actively involved. They should be encouraged to reflect on their learning and to take responsibility for their own learning (Liddicoat et al., 2003).

When new and emerging technologies are juxtaposed with these basic conditions for language learning, they do indeed hold great promise. There is no question that the Web and other technologies provide greater access to authentic and rich intercultural language input, although not all languages are equally well represented. Web 2.0 social software such as blogs, wikis, and voice and text chat lend themselves to interactivity and personal engagement but also to reflection on learning strategies. Human Language Technologies (HLT) such as Natural Language Processing, Machine Translation, Corpus Linguistics, Speech Technology, and artificial intelligence will make a significant impact on CALL (Davies, 2007), as will indeed the developments of virtual worlds and virtual tutors.

However, the majority of language teachers do not feel adequately versed in or prepared for teaching with the use of computers (Hubbard & Levy, 2006). Thus, the vision of normalized CALL (Bax, 2003), where computers in language learning and teaching are used with the same normality as books and pens, is still seen as a distant and future goal for the profession.

This is an issue of concern because many argue that the most significant impact on the effectiveness of CALL in the future will be the ability of teachers to create appropriate learning contexts and learning, to allow students to create, and to share their own content through discovery and experimentation within cyber-communities. Such fostering of learner growth and language development will generate even greater necessity for teacher and learner autonomy, and it is thus of paramount importance that learning organizations not only allow for teacher autonomy but also actively support its three fundamentals: access, knowledge, and reflection. The research described in this chapter is an example of how such support might be provided. It signifies how adherence to proven methodologies of action research informed by instructional model development theories can bring tangible results and desired improvements.

REFERENCES


**KEY TERMS**

**Adult Learning Principles:** The field of adult learning was pioneered by Malcom Knowles (1913–1997), who theorized that self-concept and motivation to learn, previous experience, readiness to learn, and a problem-centered approach to learning are the main principles.

**Computer-Assisted Language Learning (CALL):** An approach to language acquisition that utilizes computer technology to assist with the teaching and assessing of material, often including various interactive elements.

**Communicative Method/Approach:** A way to teach and learn language(s) with the goal of communicative competence. It stemmed from dissatisfaction with previous grammar-based and audiolingual approaches, and focuses on the processes of communication in various sociolinguistic contexts.

**Constructivism:** Jean Piaget (1896–1980) is credited with the development of this theory whereby learners construct new knowledge from their experiences through processes of accommodation and assimilation. Constructivism describes how learning should happen, and it is often associated with “learning by doing.”

**English as a Second Language/English as a Foreign Language (ESL/EFL):** These abbreviations are often used interchangeably to describe the science of teaching English to non-native
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speakers. ESL denotes teaching English to Non-English Speaking Background (NESB) persons in countries where English is dominant, such as Australia, Canada, the UK, or the USA. EFL denotes teaching English to NESBs in countries where English is not the official language.

Teachers of English to speakers of other Languages/Teaching English as a Second or other Language (TESOL): Both interpretations are used for the abbreviation, causing significant confusion. The first refers to the professional associations and their members, whereas the second construct is often used as the umbrella term for ESL and EFL.

Instructional Design Models: Robert Mills Gagné (1916–2002) is one of the leading theorists in models of instructional design. Models offer structure and meaning to Instructional Design problems by helping negotiate the design task through sequenced components. The context of use determines the value of a particular Instructional Design Model.

Diffusion of Innovations Theory: Everett Rogers (1931–2004) suggested a five-stage model for the diffusion of innovation (Knowledge, Persuasion, Decision, Implementation, Confirmation) and five types of adopters (innovators, early adopters, early majority, late majority, and laggards) in his 1962 book titled Diffusion of Innovation.

Practitioner-Based Inquiry (PBE): Small-scale, applied educational research activity by practitioners in fields such as school teaching, nurse education, and social work to address professional concerns.

Second Language Acquisition (SLA): The process by which learners acquire an additional language, often termed the target language. SLA focuses on the language system and learning processes of naturalistic acquisition of language. Stephen Krashen used the term “language acquisition” to differentiate from formal language learning.

Teacher Autonomy: Involvement in and ownership of the change process. It encompasses professional freedom, self-directed professional development, transformation through dialogue, critical reflection, and analysis of the teaching process.

APPENDIX 1. DESCRIPTION OF PARTICIPANTS IN RELATION TO THEIR (SELF-PERCEIVED) CALL EXPERIENCE AND TRAINING

Participant A. Usually teaches CALL in a few five-week courses a year and considers herself a teacher who had some limited experience in CALL and only through her work at MUELC. She did not study CALL as a university subject or as a short course. Her only training was received through MUELC’s Professional Development workshops.

Participant B. He teaches CALL at least once a week in a few five-week courses a year and believes he possesses practical knowledge of CALL with some past experience, which he considers “very out of date,” gained by choosing CALL as a unit at a postgraduate level. He also attended short courses in CALL.
Participant C. Teaches CALL at least once a week in almost every course, seeing it as good fun for students as well as an opportunity to be creative in learning English and increase their computer skills in a nonthreatening way. She did not study CALL at a tertiary level and did not attend any short courses in CALL.

Participant D. The fourth member of the team is involved in teaching a few CALL courses a year and thinks he has a practical knowledge of CALL, which was also a subject he has done at a tertiary level.

Participant E. He teaches mainly CALL and has a sound theoretical and practical knowledge of CALL gained through his Master’s degree course.

Participant F. He teaches CALL regularly, one or two classes in almost every course in the year. He sees himself as a teacher with sound theoretical and practical knowledge of CALL. He completed a semester unit in CALL at a university level, which was quite in-depth, and though some years have passed, this knowledge is still functional.