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CALL research archive: How can an online knowledge base further communication among second language professionals

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Abstract

The inspiration for our project arose from a perceived gap between research in foreign/second language learning and classroom practice. In order to address this issue, we created a web site containing summaries of seminal articles in the area of CALL – computer assisted language learning. The summaries are useful for many teachers who do not have time to read full text journal articles and understand the statistical terms, but would like to take advantage of the research findings. Researchers will receive feedback from teachers in the form of comments, which may give insight for further research. Other features of the website are: a database of teachers' comments and demographic information, keyword search, index, glossary, chronological and alphabetical bibliography, links to research archives and sites assisting with statistical terminology and design of experiments.

1 Introduction

In this paper we present an overview of the conceptual origin, purposes and features of a project aimed at developing a CALL-related online database. To the best of our knowledge, our website is the first known use of on-line information systems to encourage communication between foreign/second language researchers and language classroom

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teachers in the use of CALL-related research.

As teachers, we realize that clinical practice has enriched and indelibly shaped our perspectives as language professionals. As graduate students, we understand that the importance of research cannot be overstated and that its relevance is unquestioned, as its exercise underpins the existence of the academic world and "The surest avenue to improve educational practice will occur through the application of knowledge derived from careful research" (Kamil, Langer & Shanahan, 1985:ix).

However, in our graduate classes and at professional conferences, the existence of a division between research/academia and practice/classroom sectors within the language teaching profession in the United States has been repeatedly mentioned with concern. This is not a new concern, as Stern (1983:57) states, "...language teaching lacks direction. There has been little discussion about research emphasis." Stern also urges researchers to include 'dissemination' as a critical final phase of their research and to regard teachers as participants in research. In our project we have addressed a disconnect between second language education research and practice in the United States. We believe our website and the inclusion of practice-oriented summaries contribute to a collaborative solution for the dissemination of research which could generate benefits for language professionals globally.

2 Statement of the problem

Why is there a consistent disconnect between second language education research and clinical experience in the United States and how can this gap be bridged? The historical background of the foundation of the US educational research and development system offers some insights. In the early 1900's, the United States found itself embracing exploration of the effects of behaviorism in response to the demands of the industrial revolution. This psychological theory of human existence and thought shaped all aspects of education. During this critical period in the United States, the University of Chicago Laboratory School was the source of development for the field of educational research, with two camps of educational theory in residence. One, espoused by the educational philosopher John Dewey (1929), focused on the critical importance of a collaboratively built and shared knowledge base for transmission of knowledge from one teacher to another. The integration of knowledge gained from interaction with other teachers was the linchpin of this theory. The other camp was represented by Edward Thorndike's (1921) perspective and embraced the competing concept of an empirical knowledge base gained through objective behaviorism. It advocated experimental, comparative methods and measured outcomes as guiding principles.

Thorndike's views were eventually adopted as the preferred educational theory, causing an inclination toward acquisition of empirical knowledge with emphasis on isolating variables, incorporating methods from physical sciences, and pursuing quantitative outcomes.

Even though Dewey's work indicated that the accumulation and sharing of relevant instruction was extremely valuable for teachers, the possession of a different, formal knowledge by researchers created a gulf between practitioners and researchers within the field of foreign language learning.

> "First...the methods produced exactly the kind of knowledge that many teachers find difficult to apply to their particular contexts. The knowledge often is

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> represented in forms that are relatively abstract, ignore contextual influences, and isolate aspects of practice that cannot easily be reintegrated with interacting features of classrooms. Second, the approach to improvement meant the emergence of two professional communities – school practitioners and university researchers" (Hiebert, Gallimore & Stigler, 2002:11).

The consequences have been long lasting. Even today, the "theoretical" and "scientific" character of researchers' knowledge is commonly felt to be the only solid source for educational research.

Share and Stanovich (1995) refer to the current polarization of the field as a division between the world of the lab and that of the classroom. The term "disciplinary wars" is used to describe a similar division between professionals in other educational fields (McCutcheon, 1995) and it is to be hoped that division among language education professionals does not approach that conflictive state.

A further rationale for the division may be gained from examination of the problematic aspects of communication for the two communities. The knowledge teachers actually value and use is of a different type than that usually presented by educational researchers (Cochran-Smith & Lytle, 1990, 1993; Doyle, 1990; Huberman, 1985; Leinhardt, 1990).

This teacher-valued *craft knowledge* is "characterized more by its concreteness and contextual richness than its generalizability and context independence" (Hiebert *et al.*, 2002:3). Acquisition of this knowledge seems to begin in the teaching environment through the process of "apprenticeship" discussed in the Craft Model (Wallace, 1991), where new teachers have the opportunity to learn in context from observation and collaboration with more experienced teachers.

A comparison of the two groups of language professionals may add further insights into the differences that cause a communication gap. Teachers lack background knowledge in statistics and design of experiments, the lexicon of research jargon, time for interpretation of unfamiliar formats, and context for researchers' backgrounds and journal areas of specialization. Researchers' academic pressures and publishing demands leave little time for additional responsibilities. Interaction with their language-teaching colleagues is limited to occasional seminars and conferences or actual teacher education classes. Difficulty arises when researchers seek to translate abstract research and language into "applied" language.

It is also recognized that the purpose of some research is theoretical or the conclusions are not applicable for the classroom. Research may be highly explorative in nature, such as a research question addressed in a longitudinal study.

> "… to claim that academic research should justify itself in terms of its usefulness or applicability to real-world professional practice is to deny academic freedom and the joy of discovery for its own sake. And it is similarly wrong to imply that professionals should base their professional actions primarily on the results of academic research and theorizing" (Richards & Renandya, 2002:53).

However, there is concern that educational research is not frequently used for improvement of classroom teaching and learning (National Educational Research Policies and Priorities Board, 1999). Teachers do not regularly find and translate research-based knowledge to aid in their teaching and researchers lack communication with teachers to

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fully understand topics of concern or areas where research might be valued.

How can researchers and teachers communicate to bridge this gap? In order for any two groups to collaborate and sustain a viable exchange of information, each must bring something to the table that interests the other and each must interact with the other, and influence as well as gain from the other.

To see how this might work, an examination of the characteristics of each group can clarify what each can offer (Richards & Renandya, 2002). Academic researchers focus on reflecting thoughts, whereas teachers focus on thoughts of action that impact instruction. Researchers are involved in thinking and researching, and their principal purpose of action is to refine their thinking. They are information gatherers, reflect a great deal about the import of their information and are not perceived as agents of immediate real-world change. They are evaluated in the short term in relationship to their publications. Teachers are also thinkers, but they think to improve upon action that takes place in the immediacy of their classrooms. They focus upon solutions and seek information they can put to use to effect some change in classroom instruction. They are evaluated in the short term by improvement or valuable change for their students.

In order to bridge these differences in function and focus, the two groups will have to collaborate. Through collaboration, common professional language should emerge, aiding to unify conceptualizations of language teaching, in both philosophy and practice, resulting in a more coherent approach to instruction.

An additional aid to collaboration might be to experiment with new methods of data collection for pedagogical research. Johnson and Golombek (2002) suggest that the use of narrative inquiry assists in breaking the pattern of knowledge transfer from researcher to teacher and emphasizes the validity of a teacher's experience. The position of knowledge generator is passed from the researcher to the teacher, and in turn, from the teacher to the researcher.

> "Researchers may need to find more creative, time-efficient ways to transfer knowledge to teachers. Teachers may or may not need to work with researchers for negotiation of the best way to translate conclusions into useful form for classroom application. Web technology might be utilized to provide direct access to research" (Willinsky, 2001:9).

A particular recommendation on the establishment of national databases to encourage collaboration comes from the National Research Council's Committee on Developments in the Science of Learning: "To capitalize on the new developments in information systems, research scientists of varying disciplines should be linked together, and teachers should be included in these virtual dialogues" (Bransford, Brown & Cooking, 1999:239). Could a method of collaboration that incorporated all of these features be provided through the establishment of a CALL research website and exploitation of on-line information systems?

3 Development of the project

It became clear that there were two distinct needs: communication within the foreign and second language teaching profession in order to foster unity of discourse and improve instruction, as well as the creation of a knowledge base resource to support this professional synergy. It was decided to build a pilot project, incorporating only CALL research articles, to examine how such a website might function on a small scale as a

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tool for language professionals.

The expansion of technology use for both academics and language teachers has been steady within the United States. Second language researchers have rapidly adopted the available resources of computer technology through use of the Internet, email, and word processing programs. Even with a deplorable lack of funding for second language budgets and a dearth of opportunities for technology training tailored for second language acquisition, language teachers have become computer literate (able to use email, the Internet, and word processing software) and able to integrate use of basic computer technology into their lessons (Feng &Whittier, 2000). Enterprising language teachers have acquired the lion's share of technology training through that provided in the mainstream of education, and adapted it to their needs through use of "craft knowledge" and collaboration with other teachers.

This collaboration may underpin the successful exchange of information and growth in professional development. In fact, studies of innovation show that sustained improvement in teaching often hinges on the development of teachers-as-learners who collaborate with one another to study teaching and its effects (Joyce & Showers, 1995). Blase and Blase (1998) stated that their data indicate that effective instructional leadership was frequently based on collaboration-related beliefs such as:

- We are all learners; thus school is a community of learners, including faculty, staff, students, parents, and administrators.
- We are all lifelong learners; thus, our goal is to prepare students for lifelong learning by teaching them (helping them learn) how to learn.
- We are all coaches; thus we learn from each other and help others learn.
- We are all colleagues and collaborators.
- We openly discuss our views and work toward consensus. This includes dialogue about curriculum, instruction, and program administration vis-a-vis students, teachers, administrators, supervisors, and parents. Such dialogue spans philosophy, belief, literature, and research.

This credo of collaboration reflects the educational philosophy of John Dewey (1929), who believed that the sharing of knowledge between educators was essential because the beneficial consequences of excellent teaching extend only to the students of the gifted teachers. He was greatly concerned by the immeasurable waste and loss when knowledge is not shared.

Contemplation of such ongoing and irretrievable loss underscores the need for the pursuit of possibilities available through these of the Internet: to develop a knowledge archive and to encourage collaborative communication between language professionals. Collaboration occurs at our site when language professionals make comments or discuss research after reading its summary. Colleagues inform practice and build research from these comments, as well as build their use of professional language. Through the use of our site, language teachers and researchers can exchange information and opinions and get feedback in an interactive manner.

It is not to say that just because a web-connected computer might be used to facilitate this task, it automatically should be. The technology to be chosen must be evaluated in relation to the task (Alessi & Trollip, 2001). Once the objectives of the task have been identified, a clear design platform can be derived. This design platform guides all

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further project growth and the assessment of the project's viability.

So we first examine the task. It is understood that the guiding task for this paper's theme has been defined as the satisfaction of two distinct needs: (1) communication within the foreign language profession in order to promote unity and (2) the creation of a knowledge base resource to support professional exchange of information and growth of professional discourse. In analysing the criteria for the use of web technology, these needs can be satisfied through the use of the web, because (1) there are no limitations in terms of time and space; we intend to reach a substantial audience of language professionals who are separated by differences in time and by space; (2) our audience will benefit from communication features provided by the web, such as computer-mediated-communication, chat rooms, threaded discussions, white boards; language professionals can exchange, discuss and debate ideas via the web; (3) the open-ended nature of the web is compatible with the characteristics of the intended audience: the site is designed for multiple language professionals who will have various questions or purposes in mind; (4) our audience will benefit from research on the web as a source of constantly available research data and help with statistical design methods and terminology; and (5) the use of the web is more cost-effective than, for example, setting up a research center to facilitate communication between teachers and academics (Alessi & Trollip, 2001; Horton, 2000).

Given the appropriateness of the use of the web for the purposes of furthering communication among second and foreign language professionals, the design of the Language Education Forum database website (under construction) was undertaken at http://myweb.uiowa.edu/jhsmith/callresearcharchive, but is currently being transferred to a single server.

4 Features of the website

This is a pilot website containing summaries of benchmark CALL research studies related to FL/SL teaching. Currently it includes articles in the three areas of CALL: teaching writing, teaching vocabulary, and web-based learning. We feel that the site could be expanded to include all research areas of foreign language education. Each summary contains, in a 5 to10-line paragraph, the information most applicable for language classroom teaching and useful to a classroom teacher (for example, results of a study and its practical implications). The users of the website are encouraged to rate the summaries and comment on the applicability of particular research to the specific classroom contexts with which the users have personal experience. Researchers will receive such feedback in the form of ratings and comments from teachers, which may give insight for further research.

Other features of the website are:

1. Keyword search of the summaries. Website users will be able to find research related to their question or interest by means of a keyword search of all summaries available in the database.
2. Searchable international demographic database of raters' information. The website users are encouraged to provide us with the information on their location, occupation, areas of interest/emphasis, and years in occupation. This information is entered in the database and allows other users to search summaries commented on by individuals from a specific location, with a particular occupation, area of

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interest and emphasis, and with a specified number of years in occupation.
3. Searchable database of teachers' and researchers' ratings and comments. After reading a summary, users are also encouraged to rate it and comment on it as to its applicability to their classroom practice. This information is entered in the database and allows a search of comments made by individuals from a specific location, with a particular occupation, area of interest and emphasis, and with a specified number of years in occupation.
4. Glossary of terms helpful in reading the summaries of the research and full text articles.
5. Site index.
6. Other resources, such as research links, alphabetical bibliography, chronological bibliography.

Possible future additions to the website/database include:

1. Threaded discussions about research topics.
2. Curriculum archive.
3. CALL project archive.
4. Action research section for research postings from teachers.
5. Chat rooms.
6. Opportunities to participate in foreign language education surveys/research instruments online.
7. White board capability for visual negotiation of meaning, information visualization or model construction.

5 Conclusion

In order to address a widely acknowledged concern over a disconnect between language teachers and researchers, we created the Foreign Language Forum website, whose purpose is to contribute to building bridges between the two groups. However, we recognize that our website only partially addresses the problem. Constructive solutions should stem from considerations of the need for teacher training in professional development, as well as effective dissemination of research. Teacher training for technology applications can be addressed at multiple levels: outlining competencies necessary for technology use in the classroom, providing technology training classes, promoting collaboration between higher education institutions, secondary schools and industries, ensuring flexible support for minority and veteran teachers in technology training, and scaffolding technical staff support in schools (Feng & Whittier, 2000).

The effective dissemination of information relies on knowing the information the end users need and perceive as critical, as well as packaging the information in a format and language preferred by them (Westbrook & Lumbley, 1990). Teachers should be encouraged to explore and familiarize themselves with academic research. Panels of teachers-as-end-users might be included in online discussions prior to beginning research. Such collaboration could lead to research informing both groups and a strengthening of teaching knowledge, which is dynamic and developmental (Freeman, 1991). Teachers can give feedback on the ease of understanding research terminology and syntax, which is legendary for its obscurity.

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"Professional pedagogy, still alternating between the Middle Ages and modern science, can produce what Henshaw Ward once called the most repellent prose known to man" (Chase, 1978:41).

As professionals voice their ideas, the ideas are developed and changed (Freeman & Richards, 1996). Potential rewards gained from such collaboration include: connections to classroom practice, teacher familiarity with current pedagogical thought, as well as the awareness of teachers' interest in the use of different sections of the research report, i.e. summary, abstract, introduction, purpose, methods, findings, conclusions and recommendations. In a very pragmatic manner, such communication could also strengthen the articulation of unified discourse among language professionals.

The website represents a work in progress. We perceive that continued development of the project calls for greater human and financial resources and we anticipate that the following issues will need to be faced as the website is being further developed: criteria for selection of articles and writing of summaries; encouragement of authors to submit own summaries of their research; ethics in writing and editing; coping with the site expansion; sponsorship and funding for the website; selection of website maintenance personnel; and finally marketing and publicizing of the site.

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