EDITORIAL

English is my second language. Like most of the subscribers in the twenty countries we now serve, I would rather write in my native language. But we all realize that we have to study foreign languages to succeed in international communication.

Fortunately, I have several excellent computer applications that help me improve my English. The WordPerfect spelling checker and thesaurus is indispensable, and I find the Gramatik IV grammar and style checker helpful. Other tools I find useful are: Clue - a resident bilingual dictionary, Franklin Speaking Ace - a calculator-like device that can pronounce each of the 90,000 words in the built in dictionary, and several drill and practice applications.

So, the question is, do distance education institutions utilize the potential of computer-assisted language learning?

COMPUTER-ASSISTED LANGUAGE LEARNING AT A DISTANCE:
An International Survey

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By Dominique Abrioux
Associate Professor of French and
Associate Vice-President Academic at Athabasca University

Please post comments or questions to the author on Bitnet: DOMINIQU@CS.ATHABASCAU.CA

Introduction

Whereas Computer-Assisted Language Learning (CALL) has become fully entrenched as an effective pedagogy for the teaching of second languages (L2) in campus-based programs, a recent search of the distance education literature suggested a paucity of
applications in open or distance-based offerings (Abrioux, 1989).

The present study, by directly approaching practitioners of L2 instruction in distance education institutions, seeks both to quantify the current and anticipated use of CALL in distance education settings at the tertiary level and to analyze the evolving trend.

Methodology

Three sources were used to identify institutions internationally that either were or might be engaged in the university or university-level teaching at a distance of second languages: the NUCEA Independent Study Catalogue (1989), the ICDE Institutional Membership List (1988), and a personal index of Distance Teaching Universities. The first reference, because it consists of a compilation by discipline and by level of all courses taught at a distance in North America, provided a comprehensive, all but definitive list of L2 university-level instruction at a distance in North America. The other two sources, however, identified institutions but not disciplines, and thus were expected to elicit in some cases responses that would indicate that they were not engaged in L2 instruction at a distance. A mailing list was compiled of seventy-two institutions: eight Canadian, thirty-seven American, and twenty-seven from other countries in the world. In the Spring of 1989, these institutions were sent a questionnaire along with a cover letter. During the six months that followed the mailing, thirty-eight responses were received. In December of 1989, reminders and a second copy of the survey were sent to the thirty-four institutions that had failed to reply. The covering letter was similar to the original one but did emphasize that this was a second attempt to receive the information being requested and asked for assistance to ensure that the package was directed to the appropriate person in that institution. As a result of this second mail-out, a further twenty-seven questionnaires were returned, thus providing information from sixty-five institutions, that is, a 90% response rate. Of these sixty-five, however, seventeen reported that they were not engaged in L2 instruction at a distance, thereby providing, for the purpose of further study, a sample of forty-eight institutions: eight Canadian, twenty-five American, and fifteen from other countries.

Languages Taught at a Distance

Table 1 identifies the various languages taught at a distance by the surveyed institutions:

Table 1. Languages Taught at a Distance.

<table>
<thead>
<tr>
<th>Language</th>
<th>Frequency</th>
<th>% of Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>French</td>
<td>36</td>
<td>75%</td>
</tr>
<tr>
<td>Spanish</td>
<td>30</td>
<td>63%</td>
</tr>
<tr>
<td>German</td>
<td>29</td>
<td>60%</td>
</tr>
<tr>
<td>English</td>
<td>21</td>
<td>44%</td>
</tr>
<tr>
<td>Russian</td>
<td>9</td>
<td>19%</td>
</tr>
<tr>
<td>Italian</td>
<td>8</td>
<td>17%</td>
</tr>
<tr>
<td>Latin</td>
<td>8</td>
<td>17%</td>
</tr>
<tr>
<td>Chinese</td>
<td>7</td>
<td>15%</td>
</tr>
</tbody>
</table>
Given the composition of the sample and the fact that fully two-thirds of the participating institutions use English as the sole or primary language of instruction in their teaching, it should not be surprising to note that French was identified as the most frequently taught second language at a distance. Next to English, French is, after all, spoken in more countries than any other language. Understandably, given the status of the French language in Canada, all eight institutions in that country reported teaching French at a distance. In fact, four of these universities taught no language other than French at a distance. In the United States, French is taught at a distance by 84% of the institutions surveyed. This result identifies French almost as popular as Spanish and German, each of which is taught at a distance in 88% of the universities or colleges in the United States. Were one to discount the Canadian figures, which are significant in contributing to the overall first place ranking of French, it is worth noting that French, German, and Spanish are taught with almost identical frequency in the other countries surveyed.

The relatively poor showing of English can, as has been noted, be attributed to the sample itself. That English as a second language (ESL) is taught at a distance in only two Canadian and four American institutions is due both to the anglophone nature of the institutions surveyed in those countries and to the tertiary level of studies for which they are primarily or exclusively responsible. (With the exception of the Tele-University du Quebec, all institutions participating in this study were, in fact, anglophone.) ESL is instructed at a distance in all fifteen institutions surveyed outside of North America and in six of these cases it is the only L2 taught.

Recent educational developments in Europe - for example, the establishment of the European Open University and several major funding programs sponsored by the European Commission (including LINGUA) - attest to the pivotal role that L2 in general, and ESL in particular, have already started to play in European distance education. A 1990 newsletter devoted to distance teaching in Europe, EADTU-NEWS (European Association of Distance Teaching Universities) confirms the importance that is now being attributed to L2 at a distance in Europe. It reports that open university language programs are available in Denmark, France, Germany, Italy, Norway, Portugal, and Spain, with ESL being taught the most frequently to the greatest number of students. Significant new programming in L2 is currently being planned by the British Open University (French) and the Dutch Open University (various languages).

CAI Applications in Participating Institutions

Participants were asked to identify both the courses (language and level) and the nature of the computer-assisted instruction (CAI) intervention that occurred in the distance delivery of L2 courses in their institution. CAI was categorized into four general headings: Computer Assisted Language Learning (remedia-
tion drills, tutorials, games, simulations, etc.); Computer Conferencing; Computer Managed Instruction (CMI: marking of assignments or exams, exam item banking, record keeping and tracking, placement testing, etc.); and other (a catch-all category). (For a detailed examination of CAI applications for the distance delivery of L2, consult Abrioux 1989.)

Only seven of the forty-eight institutions engaged in L2 instruction at a distance indicated any use of CAI in their courses. Table 2 presents the findings in this area:

Table 2. Use of CAI in Language Courses.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Language(s)</th>
<th>CALL</th>
<th>Confer.</th>
<th>CMI</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athabasca</td>
<td>French</td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Brigham Young</td>
<td>Chinese</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Japanese</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FernUniversitat</td>
<td>English</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mauritius*</td>
<td>French</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>English</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payam-E-Noor*</td>
<td>English</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ramkhamhaeng</td>
<td>Chinese</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>English</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>French</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>German</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Japanese</td>
<td>Yes</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Russian</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spanish</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterloo</td>
<td>French</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*These institutions did not complete the questionnaire in a way that permitted identification of how CAI is used in these courses.

Only the information provided by Athabasca University (Canada), Brigham Young University (U.S.A.), FernUniversitat (Germany), Ramkhamhaeng University (Thailand) and Waterloo University (Canada) lends itself to further analysis at this time.

Athabasca University reported two applications of CAI in the teaching of French, the one in CALL, the other in Computer Managed Instruction. This institution provides CALL software for beginner, intermediate, and advanced students in its two major regional centers. Remedial drill and practice software, commercially developed and selected for its generic application, runs on IBM compatible microcomputers with color monitors. Students who live within commuting distance of Edmonton and Calgary are encouraged to engage in this optional, supplementary activity. Copyright costs associated with the software make it too expensive for the university to provide students with loaned copies of the software. Moreover, the requirement of a color monitor to run the program would, in any event, significantly reduce the number of students who could benefit from the distribution of the software were that possible.

Student Record Keeping on Unix (TRIX), the CMI application, allows for the individual tracking of a student’s progress through any given course by both central (academic) and home-based (tutorial) staff on the university’s mainframe computer. Reports from TRIX also provide the university with comparative data on the performance of students (grades, completion rates, frequency of contact, etc.) and hence of tutors. Brigham Young
University limits its use of CAI in the distance delivery of L2 to CALL applications for its courses in Chinese and Japanese for beginners. Staff at this institution have developed software in BASIC and have also used HyperCard as an authoring tool for applications on Apple microcomputers. Students in these courses must perform in excess of twenty hours of CALL in each course. The onus for providing the hardware on which to run the programs rests entirely with the student. Applications, in order of priority, are used in: tutorials for teaching new material; written comprehension exercises; communicative role playing; and remediation drill and practice.

Computer-managed instruction applications have been used by the FernUniversitat in its delivery of intermediate English L2 (ESL) for several years. The PC-Tutor correcting system finds applications in the marking of student assignments and examinations, exam item banking, placement testing, and the recording and tracking of student progress through the course. (For a complete description, see Kuffner 1989.) In addition, this university has also developed remediation drill and practice software that is used for acquiring vocabulary in specialized L2 courses such as English for Economists and English for Mathematicians and Engineers. These micro-based lessons, which can be taken either in the student’s home, place of work, or at the FernUniversitat itself, are optional activities for students in these courses and comprise fewer than ten hours of study in either case. The FernUniversitat does have a policy in place that enables students to rent a PC from the institution.

Given the vast size of Ramkhamhaeng University (500,000 enrollments per year), it is understandable that this institution makes extensive use of CMI (exam marking, item banking, student tracking) in the administration of its L2 delivery, as it does in the delivery of all its courses both on and off campus. However, while many of Ramkhamhaeng’s students study at a distance (only 100,000 or so attend classes on campus), the quasi absence of instructional material that has been developed for these students makes it very difficult to classify this learning situation as distance education.

Waterloo University has developed CALL software for the distance teaching of French. This case is noteworthy since it involves an experiment that was conducted in 1989/1990 with students enrolled in the beginners’ course. CALL software was developed with the assistance of a grant from the Ministry of Colleges and Universities in order to supplement the written material that was presented in the course text. This software ran on IBM compatible PC’s, access to which was the students' responsibility. Notwithstanding this fact, the 100 requests for software that came in from the 123 students registered in the course clearly exceeded all expectations. Understandably, perhaps, Waterloo University has a policy which allows for fifty computers to be lent to distance-based students who enroll in Computer Science 100. There is no such policy for L2 students.

Finally, all participants in the survey were asked whether their institution had any definite plans that would cause them to answer differently one year hence when identifying the language courses taught at a distance using computers. Of the forty-eight institutions, only three responded in the affirmative, and two indicated uncertainty. The Empire State College, which at present does not teach L2 at a distance, is currently exploring the use of computers and video in the distance delivery of language courses and, depending on the outcome of the pilot studies, may
undertake such instruction soon. Whereas the Universidad Estatal a Distancia in Costa Rica is still considering the use of pro-
gammed instruction in its distance delivery of ESL, the National
Open University in the Republic of China is currently developing
CAI courseware that will soon be included in its ESL course.

CAI Applications in Other Surveyed Institutions

All four institutions that identified themselves as using CALL in
distance delivered courses also reported additional institu-
tional uses of CAL (Computer Assisted Learning) in other disci-
plines (Accounting, Computer Science, Economics, Education,
English (L1) Writing Skills, Remedial Mathematics, Statistics.)
Only Computer Science was taught with the aid of CAL in each one
of these institutions; the other disciplines were referenced in
this regard only once by any of these four institutions.

A total of twenty-five of the forty-eight institutions (52%)
that reported teaching languages at a distance, also indicated
the use of CAL applications in support of the following other
subjects being taught at a distance: Computer Science (12),
Education (8), Mathematics (7), Management (5), Statistics (5),
Economics (3), Accounting (2), English Grammar (2), Science (2),
Industrial Engineering (1), Legal Studies (1), Library Science
(1), Literature (1), Management of Information Systems (1),
Marketing (1), Political Science (1), Psychology (1), Resource
Management (1), Social Studies (1), Taxation (1), and Technology
(1).

Finally, respondents to the survey were also asked, if the
situation warranted, to identify whether the on-campus teaching
of languages involved CALL. Twenty-one of the institutions that
did not use CALL in distance delivery situations identified
themselves as dual mode institutions, and of these, eight (38%)
reported on-campus CALL in support of students registered in
on-campus L2 courses. Moreover, all three dual mode institutions
that had reported using CALL in the distance teaching situation
also identified CALL in support of on-campus teaching in their
own institution.

Discussion and Conclusions

One must conclude that the 15% CAI usage and the 9% CALL usage
in distance language teaching reported in this study is dispro-
portionately low. This is particularly true when one compares
these figures to on-campus L2 programs in which, for example,
almost one North American institution in two incorporates CALL
into its L2 instruction (Craven and Sinyor 1987, Verburg 1987,
Abrioux 1989). This discrepancy is reinforced by another finding
of this survey: whereas ten of the twenty-three institutions that
taught L2 both on campus and via distance delivery used CALL in
on-campus offerings, only two of these institutions made CALL
applications available to distance-based students. This repre-
sents a significant difference in teaching methodology, one that
was not identified in Holmberg’s recent attempt to compare the
methodologies used in teaching L2 on-campus and at a distance
(Holmberg 1989).

Two principal reasons can be offered for the significant
under-utilization of CALL in distance L2 learning situations. One
results from the medium itself, the other from its particular
application to language learning at a distance. Notwithstanding
the fact that more than half of the surveyed institutions report-
ed CAI support in the delivery at a distance of subjects other than L2, it is generally accepted that CAI plays a far less significant role in distance education than it does in the more traditional learning environment.

Some, such as Perry (1984), would suggest that this under-utilization results from the fact that the majority of distance education is performed within the confines of traditional institutions and that these institutions seek out the cheapest method of delivery, usually print. This practice might explain, in part, the low reliance on distance CALL applications in dual-mode institutions, and it does help to understand why only two of the fifteen distance teaching universities reported using this medium in L2 instruction.

Institutions dedicated to distance education do not boast particularly good track records when it comes to experimenting with different delivery modes. These institutions tend to invest heavily in a particular medium (print, television or radio), or in some combination thereof, and are thus locked into an infrastructure that supports established media at the expense of newer, untried technologies (Bates 1990, Curran 1990). In this context CAI applications are considered as expensive add-ons, judged enhancements rather than key components of the educational system.

The situation is yet more complex. Enabling student work with CAI through hardware and software is unquestionably more difficult in the case of decentralized learning. Policies concerning access to hardware and on-line or off-line learning materials or systems pose logistical and financial problems that are unique to distance delivery. The fact that CAI may also prove to be a viable partial solution to the problems, both educational and administrative, that result from the separation of learner/peer/instructor does not render the problem any the easier to resolve.

In the case of L2 learning at a distance, one can differentiate between CALL software that requires minimal hardware support that is readily accessible to many distance-based students (i.e. only a microcomputer) and other applications that necessitate a more sophisticated investment in peripheral (audio/video) devices (see Abrioux 1989). That the survey revealed no use of the second category of CALL comes as no surprise. The heavy investment in hardware that these applications necessitate has accompanied, on most campuses, the revival and transformation of the traditional language laboratory. In its metamorphosed form, the new language laboratory has become a media booth in which the computer and its peripheral audio and video devices play a key role (Thomas 1988). This interactive station, arguably one of most exciting developments in language teaching and acquisition today, is practically impossible to recreate at a distance given the necessary investment in hardware. Unfortunately, it would seem that for the foreseeable future distance educators involved in L2 teaching are not going to be able to reap the benefits of these state of the art advances in CALL, except in so far as their delivery system allows for periodic visits by students to learning centers.

Less expected, however, and somewhat more difficult to explain, is the very limited use that distance L2 programs make of more conventional, and more readily accessible, CALL applications: drill and practice tutorials, simulations, computer conferencing, and electronic mail. Several respondents to the survey gratuitously indicated that were it not for the costs involved they would very much like to make use of CAI software in their courses. Clearly, cost is one reason for the restricted use
of computerized applications in distance L2 learning. When faced with the unenviable dilemma of either investing time and money in the development of one’s own software or of passing the expensive software purchase costs on to students, most distance educators seem to opt out.

There is, perhaps, a more significant reason for this lacuna: whereas drill and practice CALL tutorials and game simulations can certainly aid the language learner to develop both grammatical and vocabulary skills, these applications do not directly address the key problem facing the distant learner: synchronic oral communication. Rather, they serve to enhance aspects of language acquisition which, while they certainly might benefit from this alternative approach, have not proved to be a methodological problem for L2 course developers.

Any attempt to explain the limited role of CALL in this learning situation must examine the pedagogy of the discipline. Whereas the ever-present print, television, radio, and audio cassettes have been the primary vehicles used for L2 instruction at a distance during the past twenty years, the absence of any real, live, human element has consistently been identified as a methodological concern: As Williams and Sharma put it:

Perhaps the most obvious question is whether or not languages, essentially tools of oral communication, can be taught effectively with a geographical distance between teacher and student. If language acquisition at a distance is not a contradiction in terms, has sufficient consideration been given to methodologies which will overcome this barrier to acquiring what is essentially a communicative skill? (Williams and Sharma 1988,126-127)

Course developers have rightfully been preoccupied with seeking ways to incorporate human interaction and oral language production into the distance learning situation (Abrioux 1982; Davis 1988; Holmberg 1989; Karpiak 1985.) While all would agree that in-person meetings, telephone tutorials, and teleconference sessions are significant ways of providing interaction, the merit of CALL in this regard remains somewhat questionable in some minds: "Communication to me means interaction between human beings: 'two-way traffic'. However valuable interaction with a computer program may be, it does not represent human communication" (Holmberg 1990). Even if one were to disagree with Holmberg on this point, we have already noted that the CALL applications that come the closest to permitting human interaction in the form of dialogue are the very ones to which distance learners cannot avail themselves. It would seem that in this regard one should not expect much more from computer applications in distance education than the provision, via electronic mail and computer conferencing, for non-contiguous, written interaction.

This internationally conducted survey clearly demonstrates that distance based L2 course developers have relied, and will continue to rely, on media other than computers in order to meet the challenges that the distance delivery of L2 gives rise to. Whereas CMI will undoubtedly continue to benefit L2 learners at a distance in much the same way as it can facilitate and improve the management of all instruction and learning at a distance, one cannot anticipate significant CAI applications for distance-based L2 learners; grammar drills and practice exercises will continue to contribute only marginally to the learning at a distance of L2 for some time to come. While this is understandable given the up-front costs that are required to develop appropriate software,
it is also unfortunate, since these applications have particularly useful applications in the acquisition of languages at a distance (see Abrioux 1989).

Similarly, the results of this survey do not allow for any optimism in anticipating uses and applications of state-of-the-art interactive computerized language stations in distance education. Given the many advantages that CALL is now recognized as providing to L2 learners, it is regrettable that distance learners will not be in a position to really benefit from current and future developments for some time to come.

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