

Adding a Computer-Based Oral Component to Distance Education Courses



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Abstract

Distance education courses can tend to be text-based, a factor that makes online courses more suitable for some disciplines than others. For language educators, in particular, this can be problematic since, in many language courses, there is a need to address all four skills: listening, speaking, reading and writing. This article will speak to the authors' experience in adding a computer-based oral component to language courses which allowed instructors focus on the development and assessment of their students' listening comprehension and speaking skills.

On many university campuses today the term "distance education" has become synonymous with online learning. Online course delivery continues to serve the needs of traditional distance education students but it also represents a strategy by academic institutions for meeting the needs of a more diverse student population. It is no longer only the domain of students who are learning at a distance because they do not live near a campus. Today many students choose online learning as a flexible method of acquiring academic credit. The flexibility of online courses allows students to accommodate work schedules, child-care responsibilities, other demands on their time and a desire for life-long learning. Additionally, online courses offer educational institutions more flexibility in scheduling traditional face-to-face courses.

Online course delivery lends itself particularly well to courses that are predominantly text-based. It has, however, been difficult for language teachers to embrace online instruction. Most language teachers recognize the importance of including in their course activities that reinforce all four skills: listening, speaking, reading and writing. The Distance Education Report (2003) indicates that to be exemplary, an online course must encourage learning by doing. They suggest that the "subject content [should be] mastered and or evaluated by doing rather than, or more than, reading (or listening)" (p. 5). In a language course, in particular, it is important that students be provided with a way to improve their production skills (speaking and writing) as well as their receptive skills (listening and reading).

Simonson, Smaldino, Albright, & Zvacek (2003) state that distance education must "permit equivalent learning experiences for distant and local students" (pp. 22-23). So, for the learning experiences to be equivalent, teachers would have to be able to provide students with opportunities to improve not only their reading and writing skills - a relatively easy goal to achieve in distance education - but also their listening and speaking

skills. Studies to date are tentative in claiming that communication skills acquired in a written environment can lead to spoken discourse competence (Chun, 1994, Hampel and Hauck, 2004).

In recent years, teachers on the cutting edge of distance education courses for languages have embraced technologies to engage distance learners in a more interactive learning environment than ever before. In addition to text-based instruction, today's innovative language teachers are using Java Applets and Shockwave movies to create hands-on exercises that reinforce vocabulary and grammar skills. Streaming audio and video are being used to enhance listening skills. However, access to these technologies and the technical expertise needed to build appropriate resources still represent a significant obstacle to most language teachers. Furthermore, the licensing cost of technologies that allow for the effective integration of oral communication is also a major barrier.

This paper will speak to the efforts of the authors to provide second and foreign language instructors with tools designed to allow them to incorporate an oral component into their online courses while eliminating the barriers that have, up until now, prevented them from doing so.

Oral Language Reinforcement and Assessment Via Computer

Since 1999, the authors have been experimenting with an Internet-based oral language reinforcement and assessment tool developed by them as part of their research into the integration of technology into language teaching and learning. The software provides an authoring template that teachers use to create their own questions, thus ensuring that the content will, unlike much of the commercially available foreign language software, reflect the vocabulary, grammar, and themes presented in the course. This is an important feature since it means that the software can be used by teachers of any second or foreign language regardless of their teaching syllabus.

Also important is that, in our experience, students place more value on this type of resource because they know that all of the material presented by the software has been created by their instructor and that it is important to their success in the course. CD ROM and Web sites that sometimes accompany textbooks can be excellent resources but they frequently contain so much information that they can be overwhelming to students. This can lead to student frustration because they are unsure about how much of the material they are actually responsible for. In online environments, especially, it is important to avoid information overload (Johnson, 2003).

Because teachers can include a picture and/or text with each recorded question, a context for questions is established. Research shows that students learn best when they use language in context (Claybourne, 1999; Halliday, 1986; Johnson, 2003). Northrup and Tracy (1998) comment that visuals and audio are useful tools for all second language learners, and Brown (1987) points out that audio and visual prompts establish a context for the questions, thus helping to ensure that test questions have content validity. Johnson (2003) states that the use of graphics enhances student motivation. Jones (2002) reported that in situations where students engaged in listening activities without the support of graphics, students complained that the lack of adequate visual information was unfair. As one student said, "Some people are visual learners and I feel you are cheating people that learn that way by not providing that" (p. 33). And Jones Vogely (as cited in Jones 2002) explains that "visual support not only makes the topic more accessible to listeners who are more visual or spatial learners but also helps all listeners to relate personally with the topic, thus reducing the anxiety that can occur when they think they don't know what's being talked about" (p. 39).

The American Federation of Teachers (2000) suggests that "distance education students must have strong written communication skills; that cyberspace coursework may be more difficult for students whose personal learning styles depend heavily on visual and verbal cues" (p.6). They add that distance education may not be as effective for students with written communication deficits" (p.7). The software is interactive and may therefore appeal to students with different learning modalities: auditory, visual and kinesthetic (Grasha and Yangerber-Hicks, 2000). Furthermore, because it allows students to post orally, it may be useful for use with students with special needs, especially those whose written communication skills are weak or hampered by disability.

The software is comprised of a suite of five tools designed to address needs communicated to us by language teachers. This is not to suggest that these five tools comprehensively meet all of the needs of language teachers. They are, however, tools that focus on the teaching and learning needs most commonly mentioned to us. The suite consists of two testing instruments, a practice tool and two tools that operate as oral discussion forums.

Online Oral Language Assessment

“Distance education students...in particular derive great benefit from the use of ongoing assessment” (Simonson, et al., 2003, p. 277). There are two testing tools in the software suite that offer teachers a way of assessing their students’ oral skills online.

In the competency test, the instructor configures the software to control the pace of the test. The questions are presented in a timed fashion and the time for answer preparation and answer recording are pre-set by the teacher. In the flex test, the students control the pace of the test. Students may record their answers as many times as the instructor configures the software to allow, and they only submit their answers when they are satisfied with their performance. The flex test reflects the mastery learning approach as opposed to a competency-based approach. Each is valid and instructors will determine when use of each type of test is appropriate during their teaching program. Frequently teachers use flex tests throughout a unit of study as formative evaluation and the competency test at the end of a unit for summative evaluation.

When teachers access student recordings, they are able to listen to the original questions, hear student responses and then they are able to record comments and feedback related to the students’ answers. Students may then access their evaluated test and may listen to their responses and their teacher’s feedback. Linking feedback so intimately with student responses makes the assessment more meaningful for students (Hall, 2000). The potential to offer students almost immediate feedback is especially important in an online framework since students can feel more isolated from the instructor and their classmates than they do in traditional teaching programs (American Federation of Teachers, 2000). In fact, the Distance Education Report (2003) cites abundant and rapid feedback the most important of its five characteristics of exemplary online courses.

The American Federation of Teachers (2000) comments that “distance education students should be able to regularly assess their own learning as well as get feedback from others” (p. 5). Because students can access their recorded answers and teacher feedback, they are in a position to assess their own competency. Crawford (1996) suggests that by reviewing their work, students will realize that the more they practice speaking, the more proficient they will become.

Online Oral Language Reinforcement

In addition to allowing instructors to offer online oral tests to students, they may also create practice activities that will encourage students to practice what has been taught. After a question is presented, students may record an oral response, listen to their recording, and then compare their response to a sample answer provided by the teacher. The sample answer allows teachers to provide an example for students, thus clarifying performance expectations and encouraging learning (Heide & Henderson, 2001). It also allows students to self-assess, something that is particularly important in online education. “Distance education students should be able to regularly assess their own learning as well as get feedback from others” (Southeastern Louisiana University, 1998, p.5).

In practice mode, work is self-paced, students can access exercises as frequently as they wish and student recordings are not made available to the teacher for marking.

Rendall’s research suggests that students like being able to replay questions and self-assess as frequently as they wish. She found that students “are motivated by the improvement in their own speed and accuracy of recall which they are able to monitor for themselves” (<http://www.cilt.org.uk/research/resfor2/rendall.htm>) as they work through computerized exercises and activities.

Frequently second and foreign language instructors will want to assess the extended speech capabilities of their students. They, as instructors of any subject in an online course, will also want to provide their students with an opportunity to discuss issues that have been presented in class. The use of online journals and discussion forums encourages students to reflectively interact with various course topics and they “promote growth beyond what regular instructor-and-student interactions provide” (Johnson, 2003, p. 41). And as Chester and Gwynne (as cited in Schulte, 2004) comment, “anecdotal evidence of student performance in asynchronous courses suggests that [they] promote participation in discussions by students who rarely, if ever, participate in discussions in face-to-face classes” (p. 7).

For these reasons, two additional tools were developed: an oral discussion forum and a student journal. Both function like a text-based threaded discussion forum except that students, instead of typing their comments, record oral responses. The oral discussion forum is public in that all students in the class are able to hear the comments posted by all of their classmates and they can post reactions to anyone in their class. The student journal is private: only the student who recorded the comments and the instructor are able to hear what the student has posted. This tool is particularly useful when teachers want students to post answers to an assignment and they don't want other students to be able to hear possible answers prior to making their posting. It also allows teachers to post private feedback for individual students.

Research Findings

The software has been piloted in a number of elementary, secondary and post-secondary institutions in Canada, the United States and Europe. Study results are preliminary but they suggest a number of factors. Prior to their use of the software, 80% of the teachers indicated that they wished that they could assess their students' oral skills more frequently than they were but that barriers such as lack of time for one-on-one interviews prevented teachers from doing so. Teachers reported that because they could test an entire class of students at once using the software, they were able to do more frequent oral language assessments. All of the teachers indicated that they strongly believed that the practice exercises they created with the practice tool helped their students to prepare for oral tests and that they were more motivated to practice their oral language skills than in the past. 96% indicated that they wanted to continue to use the software to assess the oral skills of their students.

An initial concern expressed by some teachers was that it would take at least as much time to evaluate student responses as if they were conducting one-on-one interviews with their students. In actual fact, they found that it took less time because their task was tightly focused on assessment alone. In online courses, since there is no face-to-face instruction, time that would normally be spent in class on discussions and oral language reinforcement can be redirected to online language assessment. In one pilot situation, an instructor gave oral tests to his 34 students every other week. In each test there were two questions. He reported that it took him less than one minute to evaluate each student's test and to record feedback. It should be noted that this instructor was teaching an introductory-level course and his tests targeted specific language tasks. Use of a rubric and careful question design helped him to focus on what to look for in student responses and to mark efficiently. In the case of more advanced level courses, students might be required to engage in more extended speech and this would, of course, result in longer marking sessions. The instructor could compensate for this by not testing as frequently or by using teaching assistants, if available, to do some of the marking.

Student feedback was positive as well. In surveys, 86% indicated that they thought that the practice exercises helped them to prepare for oral language tests. 96% believed that their listening skills improved and 88% thought that their speaking skills improved as a result of using the software. 96% valued the feedback feature of the software and 98% recommended that their instructor use the software in future courses.

The following are some of the more important lessons that have been learned over the past five years of the development and research process:

1. Many language departments and teachers appear to be under-resourced compared to other academic disciplines when it comes to money for software and technical support for information technology (I.T.) initiatives. Access to technical help and training personnel is often limited.

2. I.T. professionals, if available, are stretched so thinly that very limited time can be allocated to the acquisition, support and maintenance of sophisticated language systems. The time pressure that I.T. personnel are under has sometimes caused them to discourage the use of language software that they perceive as adding to their workload.
3. Software must be easy to learn and to use. This translates into a need for minimal training time and reliable performance. It has been necessary to continually find ways to provide teachers with powerful functionality while maintaining ease of use. Software user guides are helpful, but in most cases, teachers and students expect software to be so intuitive that spending time with a manual is not necessary. In some cases to achieve this goal, it is more advantageous to omit functionality that adds complexity to the learning curve or diminishes the intuitiveness of the software.
4. It is most desirable for software to be server-based so that it can be deployed on the school Intranet and the Internet. Server-based software also provides the means for more effective management of questions, tests and student answer files. Network access increases flexibility for teachers and students and it opens the door to the potential for sharing resources among teachers.
5. One benefit offered by technology is the ease with which instructors can create large banks of resource materials that can be used to supplement the textbook. Instructors must be careful, however, not to overload students with these resources. Students need to know what, out of all the resources available to them, are a mandatory part of a course and what are there for reference if desired. Too many technological resources in a course can overwhelm students and result in a backlash against technology use as well as the instructor.
6. Students involved in the piloting of the software have indicated that the skills they most want to acquire and improve are listening and speaking. Their experience, however, has been that most of their courses have emphasized the development of the reading and writing skills. Technology like the software used in this research project can help instructors address the oral skills in a more balanced fashion since it can so effectively facilitate oral language reinforcement and assessment.

As piloting continues, further research data will be collected on teacher and student reactions to computerized oral language reinforcement and testing in online learning environments.

Response to Research Findings

Research into computer-based oral language reinforcement and assessment has led the authors to develop software tools that address teaching and learning needs. It has also helped them to identify barriers that teachers frequently face as they attempt to integrate technology into their teaching programs. In response to teachers' concerns about the lack of technical support available to them, the researchers offer to host the software on their server. This eliminates teacher dependency on a local server administrator and the necessary hardware. The client software is an Internet browser plug-in that is very easy to download and install. To further their research interests, the authors make the software available to teachers interested in participating in a pilot study at no cost.

To date, the researchers have concentrated on developing tools for teachers and students using PCs running a Windows 98 or newer operating system. They recognize, however, the need for tools for Apple computer users and they are now exploring methods for making the software cross-platform. Currently, users require a basic Pentium III multimedia computer with a network card and sound card, and a headset and microphone.

Conclusion

Online education is increasingly becoming an attractive option for both students and educational institutions. As Clark (1998) comments, "online education may be the greatest technological advance to hit academia since the No. 2 pencil" (p. 66). Gibson, Tesone & Blackwell (2001) echo this sentiment: "Distance education is the wave of the future" (p. 30). Rather than limiting online offerings to a text-based format, educators are encouraged to explore ways of adding not only a listening but also a speaking component to their courses. In the case of language teachers, this goal should be paramount but it has the potential of enhancing any online course in meaningful ways.

Our experience and that of our students in using the software developed for this research has been extremely positive but there are other possibilities available to teachers who wish to add a speaking component to their online course. An Internet search focusing on oral language testing via computer will suggest various options that can be considered. As in any teaching situation, educators have a responsibility to make their courses as meaningful, relevant and pedagogically sound as possible. Including an oral component that includes listening and speaking in online language courses is a step towards meeting these goals.

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