EXTENDING THE FOREIGN LANGUAGE CLASSROOM WITH TECHNOLOGY: CREATING COMPUTERIZED ORAL ACTIVITIES AND TESTS

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Introduction

The development of oral language skills is a high priority for foreign language teachers and students alike. But it is not always easy for instructors to adequately address the development of oral proficiency as much as they would like, nor is it easy for students to develop a high level of oral proficiency based on class time alone. This article will discuss how teachers can extend the classroom with computerized oral activities they create to reinforce what has been taught in class, and how they can also create computerized oral tests that can be administered and marked over the Internet. The article will also discuss how teacher-created computerized oral language exercises and tests can be used in online courses to help students develop oral language proficiency.

There are a number of ways in which foreign language instructors typically assess their students' oral language skills: oral interviews between a student and teacher, classroom observation, oral recordings done with a cassette recorder or in a language lab to name the most commonly used strategies. Oral interviews are time-consuming, frequently difficult to schedule and are fatiguing. Managing large numbers of student cassettes is cumbersome and there is always the risk of not being able to listen to a

student's submission if the cassette tape breaks or snarls. And not all schools have access to a language lab. Flewelling had, for many years, assessed her students' oral language skills in her university's language lab. When the university closed its language lab and replaced it with a multimedia lab, rather than returning to the practice of one-on-one oral interviews with her students, she decided to investigate the possibility of oral language assessment via computer.

In 1999, the authors conceived and began to develop a software application now called XpressLab that allows for the reinforcement and assessment of oral language skills via computer. This software has undergone numerous revisions based on their experience with the software and on feedback from teachers who have used it in pilot situations in both face-to-face and online courses. Use of XpressLab in pilot situations continues to be the basis for their research into the integration of technology into foreign language programs.

Oral Language Reinforcement and Assessment

1. Traditional Courses

In face-to-face classes, teachers are readily able to plan and implement lessons designed to reinforce all four skills: listening, speaking, reading and writing. Depending on the length of the course, instructors may or may not have adequate time in class to give students enough opportunities to develop the desired level of competence in these skills. It is relatively easy to provide students with activities that will help them to work on their listening, reading and writing skills independently: it is more of a challenge to do this with the speaking skill.

The evaluation of listening, reading and writing is a fairly straightforward process. It can readily be accomplished by pen and paper tests using true/false, multiple choice, and/or essay-type questions (Baker, 2001). The assessment of speaking skills, however, is much more challenging, especially given the fact that it should be done on a regular basis (Gonzales, 1989). In some cases, it is actually neglected because of the amount of time that oral testing requires (Egan, 1999).

It would be pedagogically unsound to attempt to measure speaking proficiency with a pen and paper test (Flewelling, 1996). Therefore, other approaches are required. Traditionally, teachers have relied on classroom observation, oral interviews, and, in some cases, language lab testing to obtain oral proficiency marks for their students. Technology now offers us a new option: computer-based oral language testing.

2. Online 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. 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.

The assessment of oral language skills in online courses is equally challenging for instructors, yet it should not be neglected. Some instructors use the telephone for the assessment of students’ oral skills while others have students submit cassette tapes with speech samples to be marked. Computer-based oral language testing holds promise of

being a more efficient and reliable means of evaluating students' oral skills in an online course.

Oral Language Reinforcement and Assessment Via Computer

Existing oral communication tools such as MSN Messenger provide synchronous chat functionality and others allow for the submission of oral recordings to teachers for assessment, but all lack the type of integrated environment needed for presenting structured learning activities and tests. XpressLab is, in the authors' opinion, a practical and easy-to-use environment for teachers who want to be able to reinforce and assess oral skills online and it has been designed to respond to a myriad of teacher needs.

XpressLab 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 Yangarber-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.

Creating Activities and Questions

The following is a list of suggested question and activity types that could be developed by teachers to assess or reinforce each of the 4 skills:

1. **Listening and Speaking**

    a. **Vocabulary Recognition**

Questions can be used to determine whether students have learned vocabulary being taught. It is best to use a graphic that represents the target vocabulary as a prompt for the question. Questions could take the form of “What is this?” or the like.

    b. **Thematic Questions**

Using a picture prompt, teachers could ask questions related to a theme that had been presented in class. For example, if students had been taught how to talk about the weather in the target language, a series of questions related to pictures of various weather conditions could be presented and questions about the weather could be posed for each picture.

    c. **Situational Questions**

Teachers could ask questions that would require students to speak about a situation suggested by a picture or text prompt. For example, if a picture of two people at

a table in a restaurant were used, students could be asked to say what they thought the people were going to order or what they might be talking about. Or they could be asked what the people in the picture would do if they realized that they had forgotten their money.

d. Oral Recordings

It is possible to use oral recordings as question prompts. For example, a portion of a class lecture could be recorded, and, after the students had listened to it, they could be required to respond to questions about the lecture or to summarize the lecture's key points.

2. Reading

Questions can be used to measure a student's reading ability or reading comprehension. It is possible to use a text prompt rather than a picture prompt and ask students to read aloud what they see on the screen. A question could be as simple as asking students to read a word or a short sentence or it could require them to read a short passage. Teachers could also ask students to read a longer passage but they would have to provide students with a handout sheet with the passage on it since longer passages won't fit into the space available for prompts.

Another possibility for reinforcing the reading skill would be to have the students do a cloze activity. In the text prompt certain words would be left out and students would be required to read the paragraph aloud, filling it in with words that made sense in the overall context of the passage.

If teachers wanted to assess students' reading comprehension as opposed to their ability to ready aloud, they could ask students to read a passage and then they could pose questions designed to determine whether the students had understood what they read. Alternatively, teachers could ask students to summarize in their own words what they had read.

3. Writing

Teachers could use XpressLab to give an oral dictation to students. They would record what they wanted students to write and, as students listened, on a separate sheet of paper, they would write what they heard.

Teachers could also ask students to listen to a recorded passage and then ask them to summarize in writing what they had heard or to respond in writing to questions that were posed about the passage.

The XpressLab Toolset

The software is comprised of a suite of five tools: a practice tool, two tools that operate as oral threaded discussion forums, and two testing instruments.

1. The Practice Tool

Using the practice tool, teachers of traditional face-to-face courses can create computer-based activities designed to help students to practice oral skills during class time. Additionally, teachers may choose to create computer-based oral activities that can be accessed by students via the Internet that will allow them to practice what has been taught in class outside of class time. Online instructors will rely on this capability to

present to their students oral exercises designed to reinforce both the listening and speaking skills for both instructional and reinforcement purposes.

When students access practice exercises, they 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).

Figure 1 depicts what students see when doing a practice exercise. The graphic acts as a prompt for the question that the teacher has recorded: “What kind of animal is this?’ Students simply click “play” and the recording plays automatically. By clicking the “record” button, students can record their answer to the question. They can then click on the “compare” button to compare their answer to the sample answer recorded by the teacher.

Figure 1: Practice Exercise

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.

2. The Oral Threaded Discussion Tools

Frequently second and foreign language instructors will want to assess the extended speech capabilities of their students. They 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. It is structured

like the established text threaded discussion forums that are common in course management systems. This means that oral postings are presented in the sequence in which they are submitted by students and postings are grouped by theme, thus allowing for multiple themes to be discussed simultaneously. Discussions can occur in near real time to simulate normal face-to-face classroom conversations.

Figure 2 depicts a discussion forum. The teacher of an online Spanish course made a recording asking students to introduce themselves to their classmates. She also wrote her instructions in the text box at the head of the discussion forum. Students were able to listen to the instructor's recording where she introduced herself, and then record their own introductions. They were also able to listen to what their classmates had recorded and record comments back to them if they wished.

Figure 2: Discussion Forum

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 enables teachers to mentor their students by allowing them to post private feedback for individual students. Figure 3 depicts a student journal. The instructor has made the initial oral posting to her student and the student and teacher are able to continue recording oral postings as desired.

Figure 3: Student Journal

Instructors in traditional courses will likely have time for in-class discussions but they may wish to engage their students in online oral discussions as homework to supplement what is done in class. Instructors of online courses will be able to use the online journal and discussion forum to give students an opportunity to engage in extended speech, something that has typically been missing from many online language courses.

3. The Testing Tools

All students benefit from frequent assessment throughout a course and this is particularly true of students in online courses (Simonson, et al., 2003). 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 times for answer preparation and answer recording are pre-set by the teacher. Figure 4 depicts what students would see when taking a competency test. The instructor has recorded a question to accompany the graphic prompt: “What is the weather like in this picture?’ The amount of time allocated for answer preparation and answer recording is pre-set by the teacher. In this case the student has 10 seconds to record a response and then the test will proceed automatically to the next question. Students are not required at any time during the test to use the mouse or keyboard.

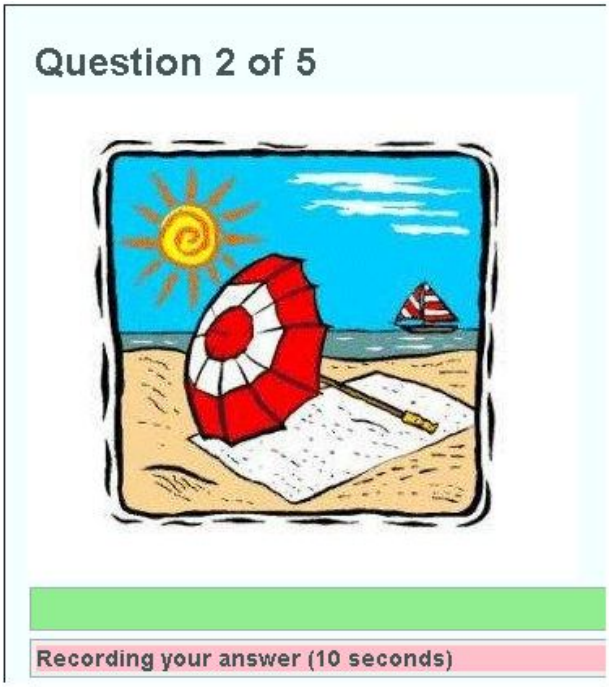

Figure 4: Competency Test

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. Figure 5 depicts what students would see when taking a flex test. Students are able to listen to each question as many times as they wish before recording and submitting their answer to the instructor.

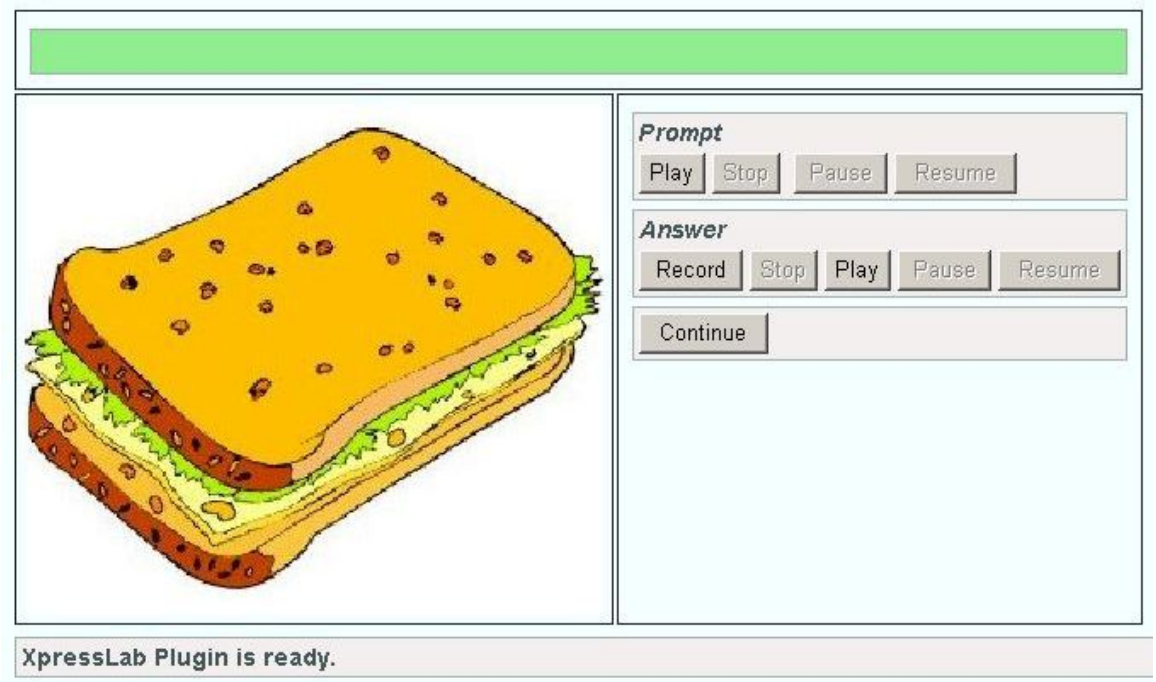

Figure 5: Flex Test

Both the competency and the flex tests are valid ways of assessing student competency 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.

The advantage of being able to conduct oral testing online is clear for instructors of online courses, but there are advantages associated with online testing for instructors of traditional courses as well. Because students access tests via the Internet it is possible to have an entire class take an oral test at once in a multimedia lab. This eliminates the need for hard to schedule, time consuming and tiring one-on-one interviews with students. It also allows teachers the luxury of being able to mark the oral tests from any networked computer, at their convenience.

Research Findings

XpressLab 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 if not more 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.[1]

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 need for required 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 at no cost to teachers willing to participate in a pilot study related to use of the software.

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

[1] Teachers who would be interested in piloting XpressLab should contact the authors via e-mail. Piloting is free of charge for the duration of a semester course. Piloting instructors and students are asked to complete a brief online survey about their experience using the software. Options for obtaining a license to use the software subsequent to the pilot period are available. For more information, please contact the authors.

III multimedia computer with a network card and sound card, and a headset and microphone.

Conclusion

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.

Educators have a responsibility to make their foreign language courses as meaningful, relevant and pedagogically sound as possible. Ensuring that students receive sufficient oral language reinforcement and assessment, whether the course be face-to-face or online, is a goal that should be met. By integrating technology into the teaching and assessment process, teachers may be better able to meet this goal.

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