Running Head: WEB-BASED ELL

Web-based English Language Learning

with Wimba Voice Technologies

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Final Report

Maricopa Institute for Learning Fellowship

Maricopa Community Colleges

June 30, 2008

ABSTRACT

The goal of this project was to explore the use of Wimba Voice Tools, a set of web-based applications that enable audio recording & playback, with adult learners of English as a second language in a community college setting. This project addressed three research questions: Can Wimba voice technologies be used to create effective listening and speaking activities for adult ESL learners? What type of corrective feedback should be given? Will students react favorably to using Wimba for language learning? Findings from research into the Constructivist Approach, a methodology for teaching second language acquisition, and best practices for computer-assisted language learning supported the conclusion that Wimba Voice Tools can easily be used to create effective instructional materials and deliver feedback. Quantitative and qualitative data gathered from eight surveys given to project participants indicated that students reacted very favorably to the use of web-based voice technologies.

Web-based English Language Learning with Wimba Voice Technologies

Learning a second language quickly and fluently is a notoriously tricky task, especially for adult learners. For adult immigrants, success in achieving their academic and vocational dreams often depends on how well they accomplish this task. To help students succeed, community college instructors need to use effective instructional methods and tools. Maricopa Community Colleges District maintains a license for Wimba Voice Tools and Oral Assessment Builder. These are web-based voice technologies that enable audio recording and playback in the form of voice boards (the oral equivalent of text-based discussion boards), voice boards attached to websites or images associated with a URL, and oral assessments that can contain listening prompts, images, multiple-choice and open-ended responses in recorded audio or typed form, and recorded corrective feedback. Specifically, this project addressed three research questions: Can effective listening and speaking activities for adult ESL learners be created with Wimba voice technologies? What type of corrective feedback should be given to students? Will students react favorably to using Wimba for web-based language learning? To answer these questions, the instructor began by investigating current methodologies for teaching second languages with a focus on listening and speaking and using computer-mediated communication (CMC) and computer-assisted language learning (CALL) techniques.

Theoretical Foundation

Goals and Learning Outcomes for Oral/Aural ESL Instruction

Before designing any type of instructional activity for an ESL course, instructors should establish general goals and specific learning outcomes that students will achieve by completing the activity. Broad goals for courses that emphasize listening and speaking generally center on the idea that students will improve their conversational ability. Learning outcomes may focus on

topics (e.g., talking about past events, describing a person), or functions (e.g., making a complaint, giving directions) that students need to engage in. Underlying these goals and outcomes are assumptions about what successful conversational ability actually entails, assumptions that are often not clearly defined. According to research by MaryAnn C. Florez (1999), director of the Adult Education Professional Development Center in Washington D.C., "good speakers" have control over cultural paralinguistic norms, such as discourse patterns of opening and closing, turn-taking, feedback, and body language. Good speakers also use correct linguistic elements, which include grammar, pronunciation, and vocabulary. Whereas a general goal of an ESL course may be to assist students in becoming better speakers by improving the areas listed above, it is often overwhelming for language learners to focus on all these paralinguistic and linguistic elements at once. In fact, best practices for second language acquisition and instructional design recommend a more structured, building block approach. Learning activities should be designed to first focus learners' attention on individual paralinguistic and linguistic elements, and then give practice in combining a few elements, and culminate with a task that requires integration of many elements.

The Constructivist Approach

Methodologies for teaching second languages have evolved in recent decades. They have gone from the audiolingual method with its emphasis on repetition of stock phrases and complete conversations to the communicative approach with its de-emphasis on form and grammatical accuracy in favor of communication of content (Knowles, 2004). Most recently, second language pedagogy has embraced the idea of constructivism, an idea generally attributed to the psychologist Lev Vygotsky (Can, 2007). A core belief of constructivism is that individuals gain knowledge and understanding through actively assembling pieces of information into a whole

(Tschirner, 2001; Cobb 2005). One does not learn by simply being told information or through rote memorization (as the audiolingual method stresses), nor does one gain true understanding without examining the parts that make up the whole (which the communicative approach dismisses). Social and developmental psychologists later added another aspect to constructivism; learning does not take place in a vacuum but with the influence of a physical environment and cultural context (Duffy, 1996). Social constructivists maintain that the primary motivation for learning is so that the individual can make sense of and function in her/his surrounding environment, which includes communicating with other individuals in that environment.

The constructivist approach for second language learning and teaching sees communication as the primary goal and motivator for acquiring linguistic competence (Rosell-Aguilar, 2005). Learners must be given opportunities to analyze and manipulate the pieces of the language (e.g., vocabulary, grammatical structures, and phonological segments) to construct their own forms in order to gain understanding of a language. To address these seemingly dichotomous elements of social interaction and individualization, teachers must provide personalized environments that allow students to follow individual paths in language development coupled with social environments that provide opportunities to interact with each other and experiment with using their linguistic constructions (Bradshaw, 2005; Hampel and Hauck, 2004; Ruschoff and Ritter 2001).

Effective Instructional Activities

Many of the current recommendations for second language listening/speaking activities follow the same tenets advocated by constructivism proponents (Bradshaw, 2005; Hampel and Hauck, 2004; Knowles, 2004; Rosell-Aguilar, 2005; Ruschoff and Ritter, 2001). One of the primary principles, individual construction of knowledge, is frequently echoed in the literature.

Delia Bradshaw (2005), mentor for the Australian government's Department of Education, Science, and Training investigated the use of voice technologies in vocational and ESL programs, and designed a model of good voice practices that "highlights the significance of personal, active engagement in successful learning", which include "self-awareness, self-access, individualised learning pathways, personalised feedback, encouragement and explanations, self-reliance, working at own pace, in own time and as often as desired or required, self-evaluation" (p. 23). Thus, instructional materials must address individual learning style, paces, and related needs.

Recommendations for effective instructional design apply to both face-to-face and computer-assisted learning situations; the mode of delivery does not change the basic principles. Erwin Tschirner (2001), professor of German at the University of Tuebingen, categorizes constructivist principles into six areas. He states that oral proficiency is more effectively and efficiently acquired when: 1) Learning is situated; 2) Input oriented learning is emphasized; 3) Output oriented learning is encouraged; 4) Cultural competence is promoted; 5) A focus on form is fostered; 6) Storage in memory of meaningful and situated sequences of sounds and words is promoted. Tschirner's (2001) third (interaction), fifth (focus on form) and sixth (memory facilitation) conditions are addressed in detail by a number of instructional designers and researchers of computer-mediated communication (CMC) and computer-assisted language learning (CALL).

Social interaction can occur in student-student, tutor-student, and teacher-student activities. Although student-computer interaction is not usually classified as a form of social interaction, the use of the computer as a vehicle to provide opportunities for social interaction, especially when learners cannot physically come together at the same time or in the same place, is

becoming widely accepted. Richard Robin (2007) senior researcher at the National Capital

Language Resource Center and Associate Professor and Language Program Director for Russian

at George Washington University, cites a host of SLA educators who agree that technology is "an

essential component of the language acquisition strategic toolbox" (p. 109). In the early years of

CALL, many instructional designers focused on the potential of computers as a source of

linguistic input for learners. However, there is now a growing emphasis on designing

instructional activities that do not only use computers as "the source of language input, or one part

of the communication chain (human – computer interaction) but the medium through which

learners communicate (human-to-human interaction via the computer) (Rosell-Aguilar, 2005, p.

418). Best practices for second language acquisition thus include the use of computer-mediated

communication as an effective tool to transcend the limitations of time and space that so

frequently diminish language learners' access to social interaction.

Tschirner's (2001) fifth condition for language acquisition, focus on form, has also been

discussed by CALL and CMC instructional designers influenced by constructivist views. This

represents a renewed emphasis on analysis and focus on form, popular prior to the advent of SLA

methodologies such as the Natural Approach and Communicative Competences in the 1980s.

These approaches downplayed language study at the "building block" level (i.e., word, sentence,

phoneme level) in favor of a top-down or holistic approach, which more closely mirrored the

processes children go through in acquiring a first language (Knowles, 2004). However, second

language acquisition, especially in adults, is a very different process from that of first language

acquisition. Dissatisfied with the shortcomings of holistic methods, which commonly result in

utterances that may get the message across but be riddled with errors (e.g., Me Tarzan, you Jane

types of utterances), instructors are once again turning to materials that will teach accuracy in

addition to fluency (e.g., My name is Tarzan. You're Jane, aren't you?).

       Josie Rose and Terry Taylor (2005), designers of ESL activities used in the Australian

Flexible Learning Framework's "Beyond Text: using your voice online" project, discussed the

pedagogical rationale for their materials:

> The general approach links a functional theory of language with the principles of an
>
> outcomes-based curriculum. Teaching methodologies support learners in moving from
>
> supported to independent construction or understanding of an oral text through to
>
> application of that text type in new and more challenging contexts. Control of new text
>
> types requires deliberate intervention through modeling, supported deconstruction and
>
> supported construction.

Their instructional units begin with a visual (pictures and text) and audio (voice recordings)

presentation of vocabulary (individual words) and conversational structures (phrases) for students

to study, then practice in seeing/hearing the target language used in context, practice for repetition

of the target language, and then opportunities for practice in new contexts in which students put

together the pieces (vocabulary, phrases) in new ways. Florez (1999) cites a variety of ESL

specialists (Brown, 1994; Burns & Joyce, 1997; Carter & McCarthy, 1995) who endorse this

pattern of focused presentation, structured practice, and "free" practice (application of structures

in new contexts) for classroom as well as computer-based learning. Specifically, recommended

types of tasks involved in the second stage, structured practice, include imitative (learner repeats a

phrase or structure to practice clarity and accuracy), intensive (drills or repetitions on specific

phonological or grammatical points), and responsive (short replies to teacher or learner questions

or comments). For the third stage, unstructured or "free" practice, tasks may be transactional

(dialogues for information exchange, such as information-gathering interviews, role plays, or debates); interpersonal (dialogues to establish or maintain social relationships, such as personal interviews or casual conversation role plays); and extensive (extended monologues such as short speeches, oral reports, or oral summaries) (Brown, 1994 cited in Florez, 1999, page 4). For beginning-level language students, instruction may include more of the structured types of tasks, as "beginners can only produce very limited utterances, especially at the beginning of their studies, so they require a larger number of stimuli and more structured activities to extract the little language they can produce" (Rosell-Aguilar, 2005, p. 422).

A similar structure for CALL instructional units (presentation, structured activities, and unstructured activities) is recommended by Lance Knowles (2004a), founder and director of DynEd International, a research and development company of multimedia ELT (English Language Teaching) courseware. Similar to the instructional designers for the Australian Flexible Learning Network, Knowles emphasizes the need for multimedia forms of presentation: "For language learning, a key element is the *synchronized* activation of the auditory, phonological, and visual systems in the brain" (Knowles, 2004a, p. 3). Providing a variety of stimuli activates different mental processors in the brain, and as neuropsychologist Donald Hebb so wittily stated, "'neurons that fire together wire together'" (Hebb, cited in Knowles, 2004a, p. 3). Knowles (2004b) also emphasized that a key for effective practice is ample opportunity for "copious practice" and repetition. Without such practice, new linguistic structures are unlikely to be retained in the learner's long-term memory, which relates to Tschirner's sixth condition, memory facilitation, for acquisition of oral proficiency. Short, frequent practice sessions over a long period of time are needed to commit information to memory and develop automaticity of understanding and production through multiple opportunities for both structured and unstructured

practice with the target forms. Knowles (2004b) refers to such opportunities as "shallow repetition", the repeating of exact words and phrases, and "deep repetition", the application and modification of linguistic structures in new contexts.

To summarize, best practices for instructional design of ESL materials recommend a process of presentation, structured practice, and unstructured practice that focus learners' attention on targeted components of the language, and engage them increasingly complex use of these components, from simple repetition to application of vocabulary and syntactical structures in novel situations. The practice opportunities should provide learners with individualized practice as well as practice with others in a social context. Finally, the practice must occur in sufficient amounts over a span of time in order to be effectively internalized into the learner's memory and result in accuracy, automaticity, and fluency of use.

Error correction and Feedback

Another element in the process of second language acquisition is feedback: learners need to know what they are doing correctly or incorrectly in order to improve. While there is general consensus that feedback is a critical component, there is a lack of agreement as to the most effective form and timing of feedback (Brosvic et al, 2006; Felix, 2004; Hincks, 2003; Mathan, 2005; Neri et al, 2001; Tsutsui, 2004). The disagreements frequently center on whether feedback should be implicit (the learner is not directly told if an utterance is correct or incorrect) or explicit (the learner is told directly), and whether the feedback should be immediate or delayed.

Language specialists generally agree on four basic principles for feedback: it must be comprehensible to the student, it should inform the student of correctness/incorrectness (it must not rely on the student's own perception of accuracy), it should explain why something is incorrect, and it should give or point students in the direction of the correct response (Ehsani,

1998; Hansen, 2006; Neri et al, 2002b). Feedback that informs the student about accuracy may be implicit or explicit. Roy Lyster, associate professor of second language education at McGill University in Montreal, identifies six forms of feedback: explicit correction, recasts (the teacher implicitly reformulates the student's utterance), elicitation (the teacher directly elicits a reformulation from students by asking questions), metalinguistic clues, clarification requests, and repetition. Recasts are implicit forms of feedback, as the learner is not directly told an error was made but simply given the correct form. This method relies on the learner noticing that the instructor has repeated an utterance in a different way, implying that the learner's utterance was not the right, and the learner then remembering and being able to repeat the utterance the way the instructor did. While this method of feedback is used the most of the six categories in face-to-face classroom interactions, it is not as effective as the others (Neri, 2001; Tsutsui, 2004). Explicit correction directly indicates there is an error but does not involve the learner in the reformulation (attempt at giving the correct answer) of the utterance. Elicitation and metalinguistic clues are types of explicit feedback, as they give students a reaction that indicates there is an error to be fixed, but more actively involve students in the analysis and reconstruction of a correct response. These three forms of explicit feedback have been found to positively affect language production (Brosvic et al, 2006; Hincks, 2003; Loewen and Erlam, 2006; Neri et al, 2001; Panova and Lyster, 2002; Tsutsui 2004).

In regards to the timing of feedback, most researchers and students favor immediate, interactive feedback over delayed feedback, although delayed feedback can be effective for language development also (Tsutsui, 2004; Neri et al, 2002b). However, the longer the delay between linguistic performance and feedback interaction between the student and teacher, the less effective it is. "From the students' point of view, a serious problem with delayed feedback is that

they cannot easily connect the instructor's feedback to the performance due to the time lag between the performance and the feedback…. students may not remember the utterance on which the instructor made a comment or students may not remember exactly what they said or meant to say and in what context or situation they said it" (Tsutui, 2004, p. 381). One way to circumvent the problem of remembering what was said is to record the linguistic performance. Fortunately for the language teacher, there are a number of software applications that have replaced the cumbersome cassette tape recorders or video cameras of yore.

One final recommendation frequently made in discussions of error correction is that not every error needs to or should be corrected (Neri et al, 2002a; Tsutsui 2004). Priority should be given to errors that most severely hinder effective communication. Especially in the area of oral performance and pronunciation, "giving feedback on every error is not productive and can discourage the student" (Tsutsui, 2004, p. 381). This does not mean that pronunciation training is not important; in fact, "correct usage of supra-segmental features such as intonation and stress has been shown to improve the syntactic and semantic intelligibility of spoken language (Crysatl, 1981, cited in Ehsani, 1998, p. 69). Feedback about pronunciation is also "crucial because the L1 influence can be so overwhelming that the learner is not able to notice the discrepancies between the sounds (s)he produces and the correct target sounds" (Neri, 2002b, p. 1), a sentiment related to the constructivist principles that learners need to be focused and engaged in the analysis of the target language in order to understand and then produce it.

CMC, CALL, & Voice Technologies

The combined views of current SLA pedagogy and best practices for instructional design challenge instructors to ensure each individual student has the opportunity for frequent practice with models to repeat, deconstruct, and reconstruct in personalized as well as social contexts.

Feedback that is understandable, explicit, timely, and engages the student cognitively should be given in conjunction with the practice. Instructors may also need to motivate some individuals to engage in this practice, especially in oral production. As Uschi Felix (2004), Director of the Research Centre for New Media in Language Learning at Monash University in Australia, notes:

> Experienced language teachers know that it can be difficult to motivate some students to speak in class. Speaking often remains the least accomplished of the four language skills, especially in older students and those who have never spent any time in the target language country. One of the reasons for this is that the development of oral skills carries a high level of ego involvement, especially when students feel exposed in front of an entire class, and that 'in conditions of high ego involvement, anxiety has typically been found to interfere with performance' (Sinclair, 1971 p. 6, cited in Felix, 2004, p. 284).

The negative influence of anxiety on language development is well-documented in the literature (Felix, 2004; Hauck and Hurd, 2005; Neri, 2002; Poza, 2005; Tschirner, 2001) Students who are more anxious about speaking do not engage in as much practice during face-to-face class time. CALL and CMC activities can equalize opportunities for each student to engage. Studies in text-based CMC, such as text-based chat rooms and discussion boards, have shown that reticent students produce more (in quantity of discourse) in CMC activities than they do during classroom activities and as much as dominant students in these activities (Felix, 2004; Hampel and Hauck, 2004; Poza, 2005). There are very few studies that have attempted to replicate these findings for oral-based CMC. However, one study conducted at the Open University of the United Kingdom's use of Lyceum, a synchronous "live classroom" platform, did not find that quieter students participated as much in the CMC environment (Hampel, 2003, as cited in Poza, 2005). Preliminary studies on asynchronous voice technologies, such as the voice boards provided by

Wimba, report findings more closely in line with those of the text-based CMC studies (Felix, 2004; McIntosh et al, 2003; Poza, 2005; Smith, 2005). These studies, which focused on student opinions of the Wimba voice technologies, report that students liked the medium because it allowed them to compose their thoughts at their own pace, record when they felt prepared, re-record as often as they needed before posting a message they were satisfied with, and receive feedback on their postings from peers and teachers. Students also reported low anxiety levels using the tool, although many reported some anxiety or self-consciousness about using the tools in public environments, such as their dorm rooms (when roommates were present) (Poza, 2005), and language labs (McIntosh et al, 2003; Poza, 2005; Smith, 2005).

Methodology

Project Design

Findings from the literature guided the design and implementation of six sets of instructional materials for an ESL021 Listening and Speaking II class, a low-intermediate level course for students of English as a second language, offered at Estrella Mountain Community College during the Spring 2008 semester. Three types of Wimba Voice Tools (Voice Presentation, Oral Assessment Builder, and Voice Board) were used to create and deliver the materials to students via web links in Blackboard, a course management platform. Quantitative and qualitative data were collected at various points in the sixteen-week semester using eight surveys (see Appendices B-I).

Instructional Materials

The materials addressed a number of course competencies, including talking about likes and dislikes of self and others, giving directions, using comparative and superlative forms of adjectives, and narrating events using past, present, and future verb forms. The materials centered

on themes from units in the textbook, <u>Side by Side 2</u> by S. Molinsky and B. Bliss. These were: Unit 1 Future and Past Events; Units 2-3 Likes, Food, and Shopping; Unit 4 Future with Will and Might; Units 5-6 Comparisons; Unit 7 Recommendations and Directions; Unit 9 It was a Bad Day. Three Wimba voice tools were used in each set. Wimba's Voice Presentation tool was used to create "linguistic deconstruction" activities to focus student attention on the vocabulary, grammar, and pronunciation for the unit. Students listened to and repeated individual words and words in context (sentences). Wimba's Oral Assessment Builder was used to create "linguistic reconstruction" activities to give students practice with applying the vocabulary and grammar in their own utterances. The oral assessment activities contained 12-15 questions each. Approximately one-third of the questions required students to listen to a voice prompt and respond by choosing or typing in a written answer, one-third required students to listen to a voice prompt and record a 1-3 sentence oral response, and one-third required students to listen to a voice prompt and record a lengthier (typically one-minute) oral response. The instructor assessed these activities and recorded corrective feedback for individuals to listen to. The feedback included comments on what they were doing well and how they could improve errors in pronunciation, word choice, and grammar related to the unit's focus. Finally, Wimba's Voice Board was used to create "social interaction" activities. Students were given a topic related to the unit theme (e.g., tell us about foods you like to eat or prepare; tell us a story about a bad day you or someone you know once had) and listened to an instructor-generated example on the voice board. They were asked to record their own two to three-minute narrative on the topic. To fulfill the assignment, they were also required to listen to at least one other student's story and to post a response (question or comment) to it, as well as to answer any questions posted on their own narratives.

Participants

The participants in this study were twelve of the fifteen members of the Spring 2008 evening section of ESL021 Listening and Speaking II, a low-intermediate level course for English as a second language students at Estrella Mountain Community College. In accordance with guidelines set by the Maricopa Community Colleges District Institutional Review Board, students were given Informed Consent letters (see Appendix A) telling them of the study and asking their permission to publically share the results of the data collection. One of the fourteen students chose not to participate. Two students stopped attending class 2-3 weeks before semester end and did not complete three of the final surveys. Data from these three students were not included in the analysis. Of the twelve study participants, five were Mexican females and two were Korean females. Four were Mexican males and one was a Korean male. Their ages ranged from 19 to 57, with the average being 32.

Quantitative Measures

In the first class meeting of the semester, participants completed the Computer Questionnaire (Appendix B) to gather data about how much previous experience they had had with using computers. This questionnaire had 9 questions designed by the instructor. It asked students to answer yes or no as to whether they had an email address, a computer with internet connectivity at home, time to use the computers in the Information Commons if they did not have a computer at home, and if they felt comfortable/confident using computers or learning new computer techniques. Participants were also asked to report how many months/years of computer experience they had had. The purpose of this questionnaire was to document the number of students with/without computer experience and to guide the instructor in deciding how much time to spend in class and what pace to use to teach students how to use the Wimba Voice Tools.

Students who indicated little or no prior experience with computers were given additional instruction in using the technology in the Information Commons outside of class time.

In the second class meeting of the semester, participants were given the Technology Attitudes Survey (Appendix C) and the Language Abilities Survey (Appendix D). The surveys were translated into Spanish and Korean using Microsoft Word 2007's translation tool and given to students in addition to the original English versions in order to help them understand the content. Students were allowed to take these surveys home, complete them at their convenience, and return them to the instructor at the following class meeting.

The Technology Attitudes survey is a modified version of the Computer Anxiety Index (CAIN) developed and validated by instructional media professors from Iowa State University (Simonson et al. 1987). The CAIN is an oft-used and cited measurement of computer anxiety for college students as well as other populations, and was the instrument used in Poza's (2005) dissertation study to measure computer attitudes of her students of Spanish as a second language. The original index contains 26 questions to answer with a 6 point Likert scale (strongly agree, agree, slightly agree, slightly disagree, disagree, strongly disagree) and has .90 reliability. The CAIN contains 12 positively-phrased questions (e.g., "A computer could make learning fun"), which are scored by assigning 1 point for strongly agree up to 6 points for strongly disagree responses. It contains 14 negatively-phrased questions (e.g., "I am usually uncomfortable when I have to use computers"), which are scored by assigning 6 points for strongly agree down to 1 point for strongly disagree. This scoring method generates a possible range of scores of 26, representing positive technology attitudes and low computer anxiety, to 156, signifying negative technology attitudes or high computer anxiety. Because this instructor felt students might react adversely to the length and redundancy of the original CAIN instrument, only 13 of the 26

questions were used. Thus, the possible range of scores for computer anxiety on the Technology

Attitudes survey was 13-78. This range was divided into five equal parts to categorize

participants as having very low, low, average, high, or very high anxiety levels when results of

the survey were calculated. The purpose of this survey was to document students' attitudes

toward using computers in general and towards using technology specifically for language

learning. There have been many discussions in recent years amongst Estrella Mountain

Community College's ESL program instructors and advisors at as to whether students are

comfortable using computers in their ESL classes, but the discussions have been based on

observational or anecdotal rather than quantitative data. Another purpose of giving this survey

was to compare participants' attitudes towards computers in general to attitudes towards the

Wimba Voice Tools.

Six additional questions not from Simonson's CAIN instrument but designed by this

instructor and used to gather data on students' attitudes toward using a variety of media devices

(computers, videos, mp3 players) specifically for English language listening and speaking

acquisition were included on the Technology Attitude survey. The results from these six

questions were not included in calculations to determine the participants' computer anxiety levels.

The Language Abilities Survey was designed by the instructor to gather information on

students' self-perceptions of their listening and speaking abilities prior to beginning the ESL021

course. It contains two sections: 13 statements on listening ability and 13 similar statements on

speaking ability. Students responded to the statements by completing a 5 point Likert Scale

(always, usually, sometimes, rarely, never). The surveys were scored by assigning 5 points for

"always" responses down to 1 point for "never" responses. Thus, the possible range of scores for

each section was 13-65, with 13 signifying very low confidence in abilities and 65 meaning very

high confidence levels. The purpose of administering this survey was to gather information on students' confidence in their skills and compare this to their anxiety levels when speaking in the synchronous face-to-face classroom environment and in the asynchronous Wimba web-based environment (as measured by the Wimba Anxiety and Foreign Language Classroom Anxiety surveys). Such comparisons would help determine if participants' reactions to using web-based voice technologies were more, less, or equally favorable to speaking in a traditional classroom setting.

Each time the students did one of the six sets of the Wimba-based instructional materials during the next twelve weeks of the semester, they completed an Assignment Tracking Form (Appendix E). The form asked students to note where, when, and how long it took them to complete the assignment. They were also asked to note how many times they listened to and recorded themselves when responding to different formats of questions. The purpose of this tracking form was to gather information on how students were using the Wimba tools and how much time-on-task these assignments were generating.

The last two quantitative measures, the FLCAS - Foreign Language Classroom Anxiety Survey (Appendix F), and the Wimba Anxiety Survey (Appendix G) were given to participants on consecutive class meetings during the second-to-last week of the course. Students took the surveys home to complete at leisure and returned them to the instructor at the following class meeting. These two surveys are slightly-modified versions of those used by Poza (2005) in her doctoral study. Her FLCAS was, in turn, modified from one originally designed by Horwitz (1986). Horwitz's (1986) instrument was created for ESL students and contained 33 items with a 5 point Likert response scale (strongly agree, agree, neither disagree nor agree, disagree, strongly disagree). Horwitz reported a reliability of .93 for it (Poza 2005).   Poza used 18 of Horwitz's 33

items and changed the term "English" to "Spanish". For this study, 15 of Poza's 18 FLCAS

questions were used and the word "Spanish" was changed back to "English". For the Wimba

Anxiety Scale, Poza (2005) modeled her questions on the FLCAS. She used 17 of its 18

questions and simply changed the words "English" and "foreign language classroom" to

"Spanish" and "Wimba voice board". She assembled a team of language acquisition experts who

validated her instrument. For this study of ESL021 students, the language was changed to

"English" and "Wimba assignments". Fifteen of the 17 items from Poza's Wimba Anxiety scale

were used. Three additional questions (numbers 16-18) were added to elicit information

regarding students' attitudes rather than anxiety towards the Wimba assignments, but responses to

these 3 items were not included in the calculations of the Wimba Anxiety scores. The completed

FLCAS and Wimba Anxiety surveys were scored following the same methods used for the

Technology Attitudes and Language Abilities surveys. The possible range of scores for the

FLCAS and Wimba Anxiety surveys were 15-75. As with the Technology Abilities survey, low

scores signify low anxiety levels towards speaking in a foreign language classroom setting or in

the web-based recording environment, and high scores represent high anxiety. Also following

procedures used to report the Technology Abilities results, each range was divided into five equal

parts and participants were categorized as having very low, low, average, high, or very high

anxiety levels for performance in the classroom and Wimba environments.

Qualitative Measures

During the last week of the semester, participants were given two evaluation surveys

which included open-ended questions to elicit subjective, qualitative responses. The Wimba

Voice Tools Evaluation (Appendix H) and the Wimba Assignments Evaluation (Appendix I)

asked students not only to numerically rate the use of Wimba in the course, but also to provide

written comments on it. Individual comments often clarified the reasons behind students' choice

of numerical ratings. These qualitative remarks provided a more comprehensive understanding of

the basis for the participants' opinions of the instructional materials and the use of voice

technologies in the course.   The Wimba Assignments Evaluation was given to students at the

second to last class meeting to take home and complete at their leisure, and the Wimba Voice

Tools Evaluation was given to students to complete in class during the last meeting of the

semester.

Results

The results of the Computer Experience Questionnaire revealed that seven of the twelve

participants (58.3%) had computers with internet connectivity at home, whereas five (41.7%) had

to use the computers in the Information Commons on campus. Of the seven students with home

computers, however, one later reported that it was difficult to get time on her home computer as

her spouse and child were "always on it"; a second student reported that her computer developed

a virus and Wimba "stopped working" on it. These two students completed most of their Wimba

assignments using the computers on campus. The amount of prior computer experience

participants had ranged from 0 to 6 years, with the average being 1 year 8 months.   Even though

over half of the students had computers at home and some experience using computers, the

majority (58.3%) reported that they were not comfortable or confident in using computers on their

own. Specifically, 2 (16.7%) stated they had no experience and were not comfortable or

confident in using computers on their own, and 5 (41.7%) noted that although they had some

experience with computers, they were not comfortable/confident using computers. The remaining

5 (41.7%) reported that they both comfortable and confident using computers.

The results of the Technology Attitudes Survey (Table 1and Figure 1) given at the beginning of the semester indicate that as a whole, participants had favorable attitudes and low anxiety towards computers. The range of scores for the participant population, 13-37 out of a possible 13-78, was fairly narrow and indicated that even the highest-scoring student had relatively low anxiety and positive attitudes towards computers in general. On the two statements
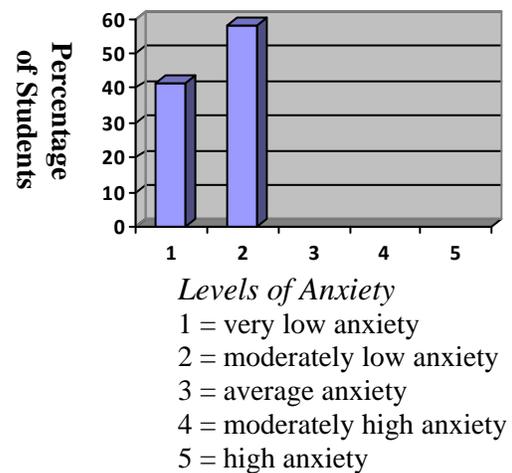
Table 1

Technology Attitude Survey Results

Number of Participants	12
*M*ean	26.75
*S*tandard Deviation	7.399
*V*ariance	54.75
*R*ange	13-37

Note: Possible range 13-78. A higher mean indicates a higher level of anxiety/negative attitude.

Figure 1

Distribution of Technology Attitudes

Levels of Anxiety
1 = very low anxiety
2 = moderately low anxiety
3 = average anxiety
4 = moderately high anxiety
5 = high anxiety

not included in these calculations on general computer anxiety but designed to gather information on students' attitudes towards using computers specifically to enhance listening and speaking skills (Appendix B, see numbers 13 and 14), 100% of the students strongly agreed or agreed that using computers could help improve these abilities.

The Language Abilities Survey results (Table 2 and Figure 2) show that in general, participants were had average confidence in their listening and speaking abilities at the beginning of the semester. While they exhibited a wider range of scores for their listening than their speaking abilities, with two students indicating that they felt moderately high confidence in this area, the majority indicated average to moderately low levels, with a mean of 37. For speaking, no students reached beyond the average confidence category, and the mean was 34. Although the

graph appears to show that students had more confidence in their listening than their speaking skills, an independent t-test shows there is no significant difference between the means when the two averages are compared.
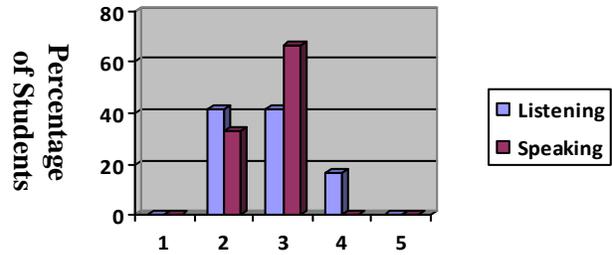
Table 2

Language Abilities Survey Results

	Listening	Speaking
N	12	12
M	37	34
SD	7.26	3.82
V	52.73	15.90
R	24-50	27-41

Note: Possible range 13-65. A higher mean indicates a higher level of confidence.

Figure 2

Distribution of Language Abilities Attitudes

Levels of Confidence
1 = very low confidence
2 = moderately low confidence
3 = average confidence
4 = moderately high confidence
5 = high confidence

Not every student turned in an Assignment Tracking form for each of the six sets of instructional units (not every participant completed every Wimba assignment), but the data gathered and compiled from the forms reveals that 5-7 participants did the assignments on their home computers and 2-5 participants did them on the campus computers; the students without home computers missed more assignments than those with home computers. Participants spent as little as 21 minutes to as much as 8 hours and 10 minutes on a unit; one particular student consistently reported spending more than 5 hours on each unit. The average amount of time reported per unit was 1 hour 45 minutes, although if the student who reported spending 5 or more hours on assignments is left out of the calculations, the average amount falls to 57 minutes. For questions that required students to listen to a voice prompt and then choose or type in a response (see Appendix E, items 6a-c), students reported they repeated the prompts an average of 2.4

times. For questions that required students to record responses to voice prompts (Appendix E, items 6d-e), they recorded an average of 2.35 times. When asked if they played back their own recording to listen to (Appendix E, item 6f), one student reported that s/he usually did "never" did for any item on half of the assignments, but the other eleven students reported that they "sometimes" (25.6% of the time) or "always" (69.2% of the time) played back their answers on each assignment.

The results of the two surveys administered near the end of the course, the Foreign Language Classroom Anxiety and the Wimba Anxiety Surveys, are displayed in Table 3 and Figure 3. An independent t-test shows there is no significant difference between the means when group averages are examined. In other words, anxiety levels for speaking in either the face-to-face or Wimba environments are generally the same. In both environments, most students feel average levels of anxiety.
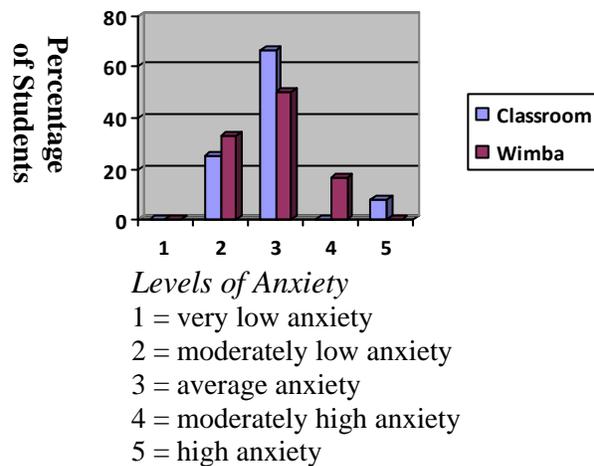
Table 3

FLCAS and Wimba Anxiety Survey Results

	FLCAS	Wimba
N	12	12
M	46.25	41.5
SD	9.25	8.1
V	85.48	65.55
R	33-71	29-58

Note: Possible range for FLCAS and Wimba Anxiety was 15-75.

Figure 3

Distribution of FLCAS & Wimba Anxiety Results

Levels of Anxiety
1 = very low anxiety
2 = moderately low anxiety
3 = average anxiety
4 = moderately high anxiety
5 = high anxiety

Results from the Wimba Evaluation (Appendix H), one of the qualitative measures used as a student evaluation of the Wimba voice technologies, reveal that 100% of the students felt the instructor should continue using Wimba as a tool for language instruction. The comments, "it's a

good program" and "helpful" were repeatedly noted. One student wrote, "In general, I think the program Wimba, is very useful and versatile for use. It represents a great assistant for learning English because it reinforces class and explanations of the teacher". When students were asked to rate the program on a scale of 1-10 for convenience of use, the average rating was 8.17, with a range of 5-10. Five students who rated it a 10 commented that it was "easy". Three of the students who rated the convenience (how easy it was to find time and a place) at 5-7 explained their ranking by noting they did not have or did not know how to use a computer well, and one who rated the program at 6 stated, "I don't have to [sic] much time". When asked to rate the program on ease of use, the average rank was 8.5, with a range of 5-10 and similar reasons again. All students indicated that they listened to the instructor's feedback and 100% of the students felt this Wimba-enabled feature was helpful for their learning. As one student wrote, "Is very importent [sic] for me that, check my mistakes and fix".

Only nine of the twelve participants submitted the ESL021 Assignments Evaluation (Appendix I), which asked them to give their opinions on the Wimba question types used in the instructional units. Of these nine, just one wrote in a qualitative comment:

> I don't have experience in computer, that take much time for my, and I don't have computer at home, so it was difficult for my because, I married and I have two jobs. But that system is good and interesting for lurn English if I have time and computer.

However, all nine students completed the Likert scale rating of the question types, and these results showed that the majority strongly agreed or agreed that each question type was helpful in improving their English (Figure 4). Although one student marked "neither agree nor disagree" for two question types (listen & record long response and record a narrative), the results did indicate that the majority of participants had favorable opinions.

Figure 4

Assignments Evaluation Results
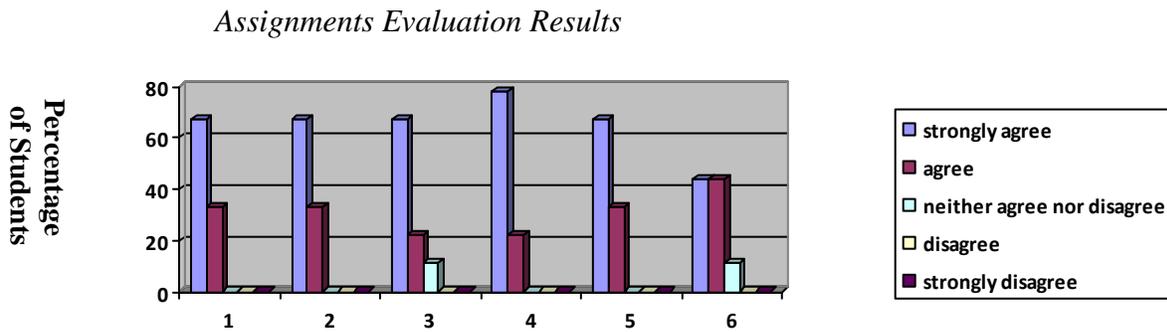
Question Types

1 = listen & repeat
2 = listen & give short response (1-2 sentence)
3 = listen & give long response (3-4 sentence)
4 = listen & choose answer
5 = record a narrative (2-3 minutes

Conclusions and Next Steps

The information gathered through the research and data collection for this project

answered the instructor's three research questions. First, Wimba's Voice Tools can easily be used

to create effective oral/aural language activities for adult ESL learners. From the instructor's

viewpoint, the tools are ideally-suited for creating activities that fit the Constructivist Approach to

second language teaching. The three voice tools used in this project, Voice Presentation, Oral

Assessment Builder, and Voice Board, can all be used to create listening and speaking exercises

that focus learner attention on and allow them to deconstruct specific linguistic elements. All

three tools can also be used to create activities that provide learners with opportunities to

reconstruct language by recording original, individual oral responses (of varying lengths – up to

30 minutes) or typing written responses to prompts. Opportunities for meaningful social

interaction and using language communicatively between classmates can be provided with the

Voice Presentation and Voice Board tools.   Additionally, Wimba voice technologies readily

allow for the "shallow repetition" (exact words and phrases), and "deep repetition" (application of linguistic structures in new contexts) required for successful language acquisition (Knowles, 2004b). According to self-reports of time-on-task and amount of item repetition on the Assignment Tracking forms, students did indeed engage in such behavior in the Wimba assignments. Overall, results from the Wimba Evaluation surveys indicate that students came to the same positive conclusions as their instructor on the effectiveness of these tools.

The literature review provided answers to the second research question, which asked about the type of feedback and error correction that should be given to second language learners. Using the Wimba voice comment (in the Oral Assessment Builder) and reply features (in the Voice Boards), the instructor gave explicit feedback regarding both the correctness and incorrectness of the pronunciation, vocabulary, and grammar under study (as opposed to every error) in the units. All students indicated in their evaluations that this feedback was helpful in improving their English. Feedback was not given in the Voice Presentation tools due to an unforeseen glitch in the Wimba version (5.1) that MCCCD currently has; for some reason, the individual reply to postings function was not working. Discussions with Wimba technicians in March 2008 confirmed that the feature had worked in the earlier version (4.2) that MCCCD had licensed, but not in the current version (5.1) that was in operation during the Spring 2008 semester. Wimba suggested upgrading to their most recent version (5.2) in which the Voice Presentation posting reply function worked properly. This information was forwarded to district information technology personnel, but no date for the upgrade has been announced as of this time. To circumvent this problem, some of the activities originally made with the Voice Presentation tool were simply incorporated into activities made with the Oral Assessment Builder, which enable the

same type of display and recording process, but also allowed the instructor to give individualized feedback as originally planned for the Voice Presentation activities.

One remaining concern about using Wimba for corrective feedback involves timing; although the literature revealed mixed views about the effectiveness of immediate versus delayed feedback (Tsutsui, 2004), preference for immediate feedback prevails. Because the Wimba Voice Tools are asynchronous, feedback is not live and immediate. Wimba has synchronous tools also, such as Wimba Classroom, but these are not currently licensed by MCCCD. The time lag between a student recording speech, the instructor listening to it and giving feedback, and the student listening to that feedback may be very short (as quickly as 5-10 minutes if both parties are at their computers at the same time), or very long (several days or possibly never if the instructor or student does not return to the assignment to complete the next step in the feedback process). However, if students do not immediately remember the utterance that the instructor refers to in the feedback, they can always play back their own voices using the Wimba controls. One might argue that although the feedback is delayed, students can still hear their original utterances and the instructor's comments one immediately after the other, which may increase effectiveness.

The results of the surveys and evaluations answered the third research question; students reacted favorably to using Wimba as an aid to language learning. The participants self-reported average levels of confidence in their listening and speaking abilities, and although 58% of the students reported concerns with their computer skills on the Computer Experience questionnaire, in general, this group of participants entered the course with moderately low to low levels of computer anxiety as measured by the Technology Attitudes survey. In fact, their levels of computer anxiety matched those reported by Poza (2003) in her dissertation. This indicates that older ESL students (the average age for this group was 32) have no greater or less anxiety about

using technology than do younger (the average age for Poza's group was 22) native-English-speaking students in a college language course. The FLCAS and Wimba Anxiety surveys also revealed that speaking in a web-based environment did not cause participants any more or less anxiety than speaking in a face-to-face classroom. Although a few students provided qualitative statements about their inexperience with computers or the time it took to do the Wimba assignments, the fact that they still, ranked the ease and convenience of use with an average of over 8 out of 10 shows that they viewed Wimba positively. Furthermore, 100% of the students recommended that the instructor continue use of these voice technologies in future classes. It could be said that students recognized that the benefits to their language learning outweighed any downsides to learning a new computer-based tool.

Of course, the conclusions are based on results from one small group of twelve students from one class. The instructor originally intended to conduct this study using two sections of the ESL021 course during the Spring 2008 semester, but one course was cancelled due to low enrollment. The instructor is currently gathering data from a Summer 2008 ESL021 class and hopes to repeat the study with two more sections during the Fall 2008. It will be very interesting to see if these future data collections corroborate the results of this study.

References

Bradshaw, D. (2005). Different voices, different spaces: A good practice model in action. Retrieved January 22, 2007 from http://www.flexiblelearning.net.au/flx/webdav/site/flxsite/shared/New%20Practices/Different_Voices_Different_Spaces_Report.pdf

Brosvic, G. M., Epstein, M. L., Cook, M. J., & Dihoff, R. E. (2005). Efficacy of error for the correction of initially incorrect assumptions and of feedback for the affirmation of correct responding: Learning in the classroom. *The Psychological Record, 55,* 401-418.

Brosvic, G. M., Epstein, M. L., Cook, M. J., & Dihoff, R. E. (2006). Acquisition and retention of Esperanto: The case for error correction and immediate feedback. *The Psychological Record, 56,* 205-218.

Can, T. (2007). Learning and teaching languages online: A constructivist approach**.** Retrieved February 2, 2008, from http://www.ingilish.com/online-learning-constructivism.htm .

Cobb, T. (2005). Foundations of linguistics – Approaches and concepts: Constructivism, applied linguistics, and language education. *Encyclopedia of Language and Linguistics, 2nd edition.* Retrieved January 16, 2008 from http://www.lextutor.ca/cv/constructivism_entry.htm .

Duffy, T. M., & Cunningham, D. J. (1996). Constructivism: Implications for the design and delivery of instruction. Retrieved November 28, 2007 from http://wlkc.lnnu.edu.cn/jxsj/seach/jiaoxueziliao/ConstructivismImplications.doc

Ehsani, F. & Knodt, E. (1998). Speech technology in computer-aided language learning: Strengths and limitations of a new CALL paradigm. *Language Learning & Technology 2, (1),* 54-73. Retrieved January 5, 2008 from http://llt.msu.edu/vol2num1/article3/.

Felix, U. (2004). Performing Beyond the comfort zone: Giving a voice to online communication. In R. Atkinson, C. McBeath, D. Jonas-Dwyer & R. Phillips (Eds), *Beyond the comfort zone: Proceedings of the 21st ASCILLITE Conference Perth,* 284-293. Retrieved January 8, 2008 from

http://www.ascilite.org.au/images/papers/conferences/perth04/procs/pdf/Performing%20beyond%20the%20comfort%20zone:%20Giving%20a%20voice%20to%20online%20communication.pdf

Felix, U. (2005). Analysing recent CALL effectiveness research — Towards a common agenda. *Computer Assisted Language Learning*, *18, (1-2,)* 1-32. Retrieved February 1, 2008 from http://libproxy.emc.maricopa.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=17742627&site=ehost-live

Florez, M. C. (1999). Improving adult English language learners' speaking skills. *Eric Digest.* Retrieved November 12, 2007 from

http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/15/eb/c1.pdf

Hampel, R. & Hauck, M. (2004). Towards an effective use of audio conferencing in distance language courses. *Language Learning & Technology, 8, (1),* 66-82. Retrieved December 2, 2007 from http://llt.msu.edu/vol8num1/hampel/

Hansen, T. K. (2006) Computer assisted pronunciation training: The four 'K's of feedback. *Current Developments in Technology-Assisted Education,* 342-6. Retrieved September 30, 2007 from http://www.formatex.org/micte2006/book1.htm

Hauck, M. & Hurd, S. (2005). Exploring the Link between language anxiety and learner self-management in open language learning context. *European Journal of Open Distance and E-learning.* Retrieved February 2, 2008 from

http://www.eurodl.org/materials/contrib/2005/Mirjam_Hauck.htm

Hincks, R. (2003). Speech Technologies for Pronunciation Feedback and Evaluation. *ReCALL 15 (1)*. 3-20. Retrieved November 12, 2007 from

http://www.speech.kth.se/~hincks/papers/REcall.pdf

Knowles, L. (2004a). The Evolution of CALL. Retrieved February 2, 2008 from

http://mebides.meb.gov.tr/files/bilgisayar_destekli_dil_egitimi.pdf

Knowles, L. (2004b). On the cusp: New developments in teaching. Retrieved February 2, 2008 from http://mebides.meb.gov.tr/files/bilgisayar_destekli_dil_egitimi.pdf

Loewen, S., & Erlam, R.   (2006). Corrective feedback in the chatroom: An experimental study *Computer Assisted Language Learning. 19,(1),* 1-14.

Lyster, R. (2001). Negotiation of form, recasts, and explicit correction in relation to error types and learner repair in immersion classrooms. Retrieved November 2, 2007 from

http://www.education.mcgill.ca/profs/lyster/Lyster2001_LL.pdf

Mathan, S. A. &. Koedinger, K. R. (2005). Fostering the intelligent novice: Learning from Errors with metacognitive tutoring. *Educational Psychologist 40(4),* 257-265.

McIntosh, S., Braul, B & Chao, C. (2003). A case study in asynchronous voice conferencing for language instruction. *Educational Media International*, *40* (1-2). Retrieved January 19, 2008 from

http://libproxy.emc.maricopa.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=10306004&site=ehost-live

Neri, A., Cucchiarini, C. & Strik, H. (2001). Effective feedback on L2 pronunciation in ASR-based CALL. *Proc. of the workshop on Computer Assisted Language Learning, Artificial Intelligence in Education Conference, AIED-2001, San Antonio, Texas,* 40-48.

Neri, A., Cucchiarini, C. & Strik, H. (2002a). Feedback in computer assisted pronunciation training: When technology meets pedagogy. *Proc. of the 10th Int. CALL Conference on "CALL professionals and the future of CALL research", University of Antwerp*, 179-188. Retrieved November 12, 2007 from http://lands.let.kun.nl/TSpublic/strik/publications/

Neri, A., Cucchiarini, C. & Strik, H. (2002b). Feedback in computer assisted pronunciation training: Technology push or demand pull? *Proc. of ICSLP-2002, Denver, USA*, 1209-1212. Retrieved November 12, 2007 from http://lands.let.kun.nl/TSpublic/strik/publications/

Neri, A., Cucchiarini, C., Strik, & Boves, H. L. (2002) . The pedagogy-technology interface in computer assisted pronunciation training. *Computer Assisted Language Learning, 15(5)*, 441-467. Retrieved November 12, 2007 from http://lands.let.kun.nl/TSpublic/strik/publications/

Panova, I., & R. Lyster. (2002). Patterns of corrective feedback and uptake in an adult ESL classroom. *TESOL Quarterly*. Retrieved December 19, 2007 from http://www.education.mcgill.ca/profs/lyster/Panova&Lyster2002_TESOLQ.pdf

Poza, M. I. C. (2005). The effects of asynchronous computer voice conferencing on learners' anxiety when speaking a foreign Language. *Dissertation.* Retrieved January 22, 2007 from https://etd.wvu.edu/etd/documentdata.eTD?documentid=4007

Robin, R. (2007). Commentary: Learner-based Listening and technological authenticity. *Language Learning and Technology, 11 (1),* 109-115. Retrieved January, 2008 from

http://llt.msu.edu/vol11/num1/robin/

Rose, J. & Taylor, T. (2005). New Practices in flexible learning beyond text: Using your voice online case study 3: English as a second language (ESL). *Australian Flexible Learning Framework Australian Government Department of Education, Science and Training.* Retrieved January 22, 2007 from

http://btresource.flexiblelearning.net.au/beyond_text_resources/bt/casestudies/esl.htm

Rosell-Aguilar, F. (2005). Task design for audiographic conferencing: Promoting beginner oral interaction in distance language learning. *Computer Assisted Language Learning***,** *18 (5),* 417-442.

Rüschoff, B., & Ritter. M. (2001). Technology-enhanced language learning: Construction of knowledge and template-based learning in the foreign language classroom. *Computer Assisted Language Learning, 14* (3-4), 219-232.

Simonson, M. R., Maurer, M., Montag-Torardi, M., & Whitaker, M. (1987). Development of a standardized test of computer literacy and a computer anxiety index. *Journal of Educational Computing Research, 3*(2), 231-247.

Smith, C. (2005). New practices in flexible learning beyond text: Using your Voice online reflection report. Retrieved January 22, 2007 from

http://btresource.flexiblelearning.net.au/beyond_text_resources/bt/resources/bt_reflection.pdf

Tschirner, E. (2001). Language Acquisition in the Classroom: The Role of Digital Video. *Computer assisted language learning*, *14 (3-4),* 305-319.

Tsutsui, M. (2004). Multimedia as a Means to enhance feedback. *Computer Assisted Language Learning***,** *17 (3/4),* 377-402.

Appendices

Appendix A – Informed Consent Letter

Informed Consent

ESL021 students,

      Inform means to tell or give information about something, *Consent* means permission or agreement. Because the work a student does in class is private and only seen by the teacher and students, a teacher must ask students for permission if the teacher wants to publicly share information from students' work with other people.

      This semester, your teacher Diane is studying students' experiences using computer exercises to improve listening and speaking abilities.

      As part of this study, she is looking at students' opinions of technology and of their own language abilities, performance on listening and speaking tests, and study habits. **Your participation** in the study **will not require any extra time** from you. **Participation** means you are giving permission for your teacher to share information from the surveys and assignments you do as **part of the usual required homework** for this class. Your teacher will write a report to summarize the information she collects and tell other educators about it. **NO INDIVIDUAL STUDENT NAMES will appear in the report or be used in discussions.**

      Your participation in the study is **voluntary**. There are no risks to participating. Participation or non-participation will have no influence on your grade for this class**. If you agree** to participate, the information will benefit the ESL program at Estrella Mountain Community College by helping us improve teaching methods and materials. The information shared with other educators will help them improve teaching materials at other colleges**. If you do not agree** to participate, you will complete the same surveys, evaluations, and assignments as the study participants. The only difference is the information will not be included in the teacher's report. **If you** agree to participate but then **change your mind**, you may tell the teacher at any time not to use your information in her report. Remember, **your name will never appear in any public report or discussion.** Your name will be on the surveys and assignments seen or heard by the teacher, but your name will not be included on any work seen or audio files heard by anyone else.

      Your teacher, Diane Stonebrink, will be happy to answer any questions. You can contact her at her **office phone, 623-935-8584**, or by **email: diane.stonebrink@estrellamountain.edu** . If you have any general questions about teachers doing studies in the Maricopa Community Colleges District, please contact Maricopa's Institutional Review Board office at 480-731-8128.

To show that you agree or disagree to participate in the study, please fill in your name and date, sign on the line, and then check the box you wish.

I understand the study described here. I am 18 years of age or older.

Print Name: _____   Date: _____

Signature: _____

☐   **I agree** to participate.

☐   **I do not agree** to participate.

Appendix B - Computer Experience Questionnaire

Name: _____

Computer Questionnaire

1. Do you have an email address? Please write *yes* or *no* to answer.

   If you wrote *yes,* please write your email address:

2. Do you have a computer with internet access at home? Please write *yes* or *no* to answer.

   If you wrote *yes,* please put an X by the type of connection you have:

   _____ dial-up modem   _____ DSL   _____ cable

3. If you do not have a computer you can use at home, please know that there are computers in the Information Commons in Estrella Hall for any student to use for free. There are also computer technicians and tutors there to help you use them.
   Do you have time (30-60 minutes) one day a week (Monday, Tuesday, Wednesday, or Thursday before or after class) to go to the Information Commons? Please write *yes* or *no* to answer.

4. How much experience have you had using computers? Please answer by writing *how many* years or months. If you have no experience, please write *none*.

7. Are you comfortable using computers? Please write *yes* or *no* to answer.

8. Are you confident you can learn new computer techniques easily? Please write *yes* or *no* to answer.

9. Are you comfortable and confident that you can a computer on your own without much help from other people? Please write *yes* or *no* to answer.

Appendix C - Technology Attitudes Survey Results

Technology Attitudes Survey 021

Directions: Please answer the questions below by putting an X in the box below the words that show your opinion for each of the sentences below. There are no right or wrong answers. The instructor wants to know how you honestly feel about computers and technology at this time.

	strongly agree	agree	agree a little	disagree a little	disagree	strongly disagree
1. If I had to use a computer for some reason, it would probably save me same time and work.	4	4	1	1	1	1
2. Having to use a computer could make my life less enjoyable.		3	1		4	4
3. Having a computer available to me could make things easier for me.	6	6				
4. I feel very negative about computers in general.	1			2	4	5
5. Having a computer available to me could make things more fun for me.	7	4	1			
6. I look forward to a time when computers are more widely used.	8	3	1			
7. I doubt if I would ever use computers very much.		2	2		3	5
8. I avoid using computers whenever I can.		1	1	3	3	4
9. I enjoy using computers.	8	5	1			
10. Computers are probably going to be an important part of my life.	6	5	1			
11. A computer could make learning fun.	6	4			1	1
12. I am usually uncomfortable when I have to use computers.		2	1	1	4	4
13. I can think of many ways that I could use a computer.	5	5		1	1	
14. Using computers can help me improve my English listening ability.	10	2				
15. Using computers can help me improve my English speaking ability.	10	2				
16. Watching videos can help me improve my English listening ability.	8	3			1	
17. Watching videos of can help me improve my English speaking ability.	6	4	2		1	
18. I think listening to conversations on an ipod or mp3 player would help me learn English.	3	7		1		1
19. The only way to learn English is to talk to real people face to face.	9	2		1		

Appendix D - Language Abilities Survey Results

Language Abilities Survey

Directions: Please answer the questions below by putting an X in the box below the words that show your opinion about your own language abilities for each of the sentences below. There are no right or wrong answers. The instructor wants to know how you honestly feel about some of your English skills at this time.

Listening Ability:	always	usually	sometimes	rarely	never
1. When I listen to native speakers of English talk in a conversation with each other, I understand most of what they say.		4	5	3	
2. When a native speaker of English asks me a question, I understand.	1	4	4	3	
3. I need to have questions repeated. *1 person left this blank*	3	3	3	1	1
4. My vocabulary is large enough for me to understand everyday conversational English.	1		6	3	2
5. My vocabulary is large enough for me to understand academic English (English in academic or class discussions).	1	1	1	8	1
6. My grammar is good enough for me to understand everyday conversational English.			6	4	2
7. My grammar is good enough for me to understand academic English (English in academic or class discussions).	1		6	4	1
8. I understand conversations that use present time or tenses (conversations about what is happening now or routinely) in English.		3	7	1	1
9. I understand conversations that use future tenses		4	6	1	1
10. I understand conversations that use past time or tenses (conversations about what happened in the past)		3	7	2	
11. When a native speaker of English asks me a question, I understand if it is about the present, past, or future time.		2	6	3	1
12. I understand the pronunciation of native speakers of English when they speak slowly.	3	1	6	2	
13. I understand the pronunciation of native speakers of English when they speak rapidly.	1		2	5	4
Speaking Ability:	always	usually	sometimes	rarely	never
1. When I speak to native speakers of English in a conversation, they understand most of what I say.		2	10		
2. When I ask a native speaker of English a question, she or he understands me.		1	11		
3. I need to repeat my questions for other people.		3	9		
4. My vocabulary is large enough for me to say what I want in everyday conversational English.			3	8	1
5. My vocabulary is large enough for me to say what I want in academic situations (academic discussions in class).			3	7	2
6. My grammar is good enough for me to say what I want in everyday conversational English.		1	4	6	1
7. My grammar is good enough for me to say what I want in academic English (academic discussions in class).			2	8	2
8. I can talk about situations using present time or tenses (conversations about what is happening now or routinely) in English.		1	8	3	
9. I can talk about situations using future tenses		2	8	2	
10. I can talk about situations using past time or tenses (conversations about what happened in the past) in English.		1	5	6	
11. I can ask questions about the past using correct grammar.			4	8	
12. I can ask questions about the past using correct pronunciation when I speak slowly.		2	8	2	
13. I can ask questions about the past using correct pronunciation when I speak rapidly.		1	3	7	1

Appendix E - Assignment Tracking Form

Assignment Tracking Form

1. Name of Assignment: _____

2. Location where I completed the assignment: *Please put an X by the place where you worked*

_____ in the Information Commons at EMCC

_____ in the Learning Enhancement Center at EMCC

_____ in the EMCC Library

_____ in a classroom at EMCC

_____ at my house

_____ at a friend's or relative's house

_____ at a public library: _____
write the name of the library

_____ at: _____
write the name of the place if it doesn't appear in the list above

3. When I completed this assignment: *Please put **write the date and the start/finish times on the line next to the day** when you did the work. If you did the work on more than one day, please write the date and times for each day. If you started and stopped more than once on the same day, please add these times as needed.*

Monday	_____	_____	_____	_____	_____
	date	*start time*	*stop time*	*start time*	*stop time*
Tuesday	_____	_____	_____	_____	_____
	date	*start time*	*stop time*	*start time*	*stop time*
Wednesday	_____	_____	_____	_____	_____
	date	*start time*	*stop time*	*start time*	*stop time*
Thursday	_____	_____	_____	_____	_____
	date	*start time*	*stop time*	*start time*	*stop time*
Friday	_____	_____	_____	_____	_____
	date	*start time*	*stop time*	*start time*	*stop time*
Saturday	_____	_____	_____	_____	_____
	date	*start time*	*stop time*	*start time*	*stop time*
Sunday	_____	_____	_____	_____	_____
	date	*start time*	*stop time*	*start time*	*stop time*

4. How much time I spent on this assignment: *Please add the amount of time you spent **in total** from the days and start/stop times above and then write that amount on the lines below.*

_____ hour(s) and _____ minute(s)

5. The web browser I used for the assignment: *Please put an X by the name of the internet service or web browser you used to access this assignment.*

_____ Internet Explorer _____ Netscape _____ Firefox

_____ Safari _____ MSN _____ AOL

_____ Other: _____
please write the name of the internet service/browser

6. Average times I listened and recorded during the assignment: *Please put an X by the boxes which describe the average number of times you listened to each type of audio question and/or recorded yourself for the speaking questions.*

a. For multiple-choice questions (choose the right answer), I usually listened:

_____ 1 time _____ 2-3 times _____ 4 or more times

b. For fill-in-the-blank questions (write a word/s to complete a sentence), I usually listened:

_____ 1 time _____ 2-3 times _____ 4 or more times

c. For dictations (listen and write what you hear), I usually listened:

_____ 1 time _____ 2-3 times _____ 4 or more times

d. When I recorded a one- or two-sentence answer to a question (used a microphone to speak an answer into the computer), I usually recorded myself:

_____ 1 time _____ 2-3 times _____ 4 or more times

e. When I recorded a long answer or story (more than 3 sentences or more than 20 seconds) to a question, I usually recorded myself:

_____ 1 time _____ 2-3 times _____ 4 or more times

f. When I recorded myself, before going to the next question I usually listened to my recording on each answer:

_____ never _____ sometimes _____ always

7. Please report any technical difficulties here: *If you had any problems using the computer to complete the assignment (for example, if the microphone didn't record your voice, if you couldn't hear the questions, if you couldn't see the pictures or words in the assignment, etc.), write comments below:*

Appendix F - Foreign Language Classroom Anxiety Survey Results

Foreign Language Classroom Anxiety Survey

Directions: Think about your experience in language classes and indicate how you feel about the following statements by putting an X in the box below the words that show your opinion for each of the sentences below. There are no right or wrong answers. The instructor wants to know how you honestly feel about speaking English in a face-to-face classroom.

	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
1. I never feel quite sure of myself when I'm speaking in my foreign language class.		3	4	5	
2. I don't worry about making mistakes in language class.		4	5	3	
3. I get nervous when I know I'm going to be called on in language class.		4	5	3	
4. It scares me when I don't understand what the teacher says in the foreign language.		4	4	4	
5. I keep thinking that the other students are better at languages than I am.	1	3	3	5	
6. It embarrasses me to volunteer answers in class.	1	2	4	4	1
7. I would not be nervous speaking the foreign language with native speakers.		2	6	4	
8. I feel confident when I speak in a foreign language class.		1	6	5	
9. I am afraid that my language teacher is going to correct every mistake I make.	1	2	1	6	2
10. I get nervous when I'm going to be called on in language class.		2	8	2	
11. I always feel that the other students speak the foreign language better than I do.		3	6	2	1
12. I feel very self-conscious about speaking the foreign language in front of other students.		4	5	3	
13. I get nervous and confused when I'm speaking in my language class.	1	6	3	2	
14. I'm afraid that the other students will laugh at me when I speak the foreign language.		2	0	10	
15. I get nervous when I don't understand every word the language teacher says.	1	3	4	4	

Appendix G - Wimba Anxiety Survey Results

Wimba Anxiety Survey

Directions: Think about your experience using Wimba, the computer tool you used to record yourself on the computer speaking English for some the assignments in this class this semester. Indicate how you feel about this tool by putting an X in the box below the words that show your opinion for each of the sentences below. There are no right or wrong answers. The instructor wants to know how you honestly feel about using the Wimba speaking/recording tool.

	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
1. I never feel quite sure of myself when I'm recording myself using Wimba in English.		2	7	2	1
2. I don't worry about making mistakes in English when I record myself using Wimba.		4	1	7	
3. I get nervous when I think about speaking English in the Wimba assignments.		6	2	4	
4. It scares me when I don't understand what the teacher says in English in the Wimba assignments.	1	4		6	1
5. I keep thinking that the other students are better at English than I am when I listen to their recordings on the Wimba voice boards.		3	5	3	1
6. It embarrasses me to answer in English to other students' comments in the Wimba voice board.		1	3	7	1
7. I would not be nervous speaking English with native speakers in the Wimba voice board.		3	5	4	
8. I feel confident when I speak English in the Wimba assignments.		4	5	3	
9. I am afraid that my English teacher is going to correct every mistake I make in the Wimba assignments.	1	1	2	6	2
10. I get nervous when I'm speaking English in the Wimba assignments when I have to record in public in the Information Commons.	1	2	3	6	
11. I don't feel nervous about speaking English in the Wimba assignments because the teacher is not present while I am recording.		3	4	5	
12. I don't feel nervous about speaking English in the Wimba voice board because my classmates are not present while I am recording.		5	4	3	
13. In the Wimba assignments, I can get so nervous I forget things I know about in English.		4	3	4	1
14. I'm afraid that the other students will laugh at me when they listen to my recordings.		3	3	5	1
15. I like to share my stories and have other students listen to me in the Wimba voice boards.	2	6	3	1	
16. I like to listen to other students' stories on the Wimba voice boards.	3	6	3		
17. I think the Wimba assignments help me improve my speaking ability.	7	3	1	1	

Appendix H - Wimba Voice Tools Evaluation Results

Wimba Evaluation

1. Do you think the teacher should continue to use this program? Why or why not?

    1. It's good program.
    2. Yes, because this program help us to learn our English and help us to correct our mistakes.
    3. Yes. Because help me too use more the computer.
    4. I should the teacher continue to use that program because is help a lot to learn English
    5. Yes, It is a good program and help me to learn Inglish.
    6. Yes. Because it is good practice
    7.   Yes the teacher continue to use this program I like the program
    8.   Yes. The teacher must continue using this program, because it represents a good learning strategy.
    9. Yes, because is very good and helpful uses this program you know for more practices.
    10. Yes I thing the samba computer it is a very good progam because I can see and andertend.
    11. yes she should continue using it because it could improve our English speaking
    12. This program is a good idea because we listening the comments of the ours homework and this help.

2. Did you go back to the assignments to listen to the comments the teacher made about your pronunciation and grammar in each of your sentences? Why or why not?

    1. Yes It's so acculetely. It's good for me.
    2. Yes, I went back for correct my mistakes according to the teacher's comments
    3. The comments from the teacher about the pronunciation and grammar are very useful because it helps us learn the English language correctly.
    4. Yes because help me to correct my pronunciation
    5. Yes, I like to listen the comments about my pronunciation.
    6. Yes, because the point is that, go back and check everything the teacher say about me pronunciantion and grammar.
    7. Yes the teacher help my pronunciation and grammar so am very hapy
    8. Yes, because she told me.
    9. Yes I want to go back to listen to the comments the teacher made becase I listen and sten so much.
    10. yes I did because that way I will know were I need to make more effort.
    11. It is important because when I am listening the comments help me to my pronuntiation.
    12. Yes, I need help for pronunciation and grammar.

3. Do you think the comments the teacher made about your mistakes and how to correct them was helpful to you? Why or why not?

1. If I listen to again it, it will better for me.
2. Yes, because with one mistake I can remember for the next times.
3. are very helpful too me because I need them
4. The comments the teacher made are good because she help a lot to pronunciation the words better
5. Yes, because I like to know what is the correct form
6. When the teacher says about my mistakes and correct them as much helped me to improve my pronunciation and my writing.
7.   Yes, of course. Is very importent for me that, check my mistakes and fix.
8.   Yes, help me every time.
9. Yes, I think it was helpful because it taught me things I didn't know.
10. Yes it was helpful to me, because I could understand a little bit better, and I could pronance better
11. The comments listed to help me, to make better the proununtiation
12. Yes, because she helped my pronunciation.

4. On a scale from 1 to 10 (1=very low, 5=average, 10=very high, etc.), please rate how convenient (=how easy it was to find time and a place) to use the Wimba program and why you rate it this way.

Total/Average Rating number: **8.17**

1. 10   It's a very good program because it is easy to use
2. 5   Because I don't have a computer
3. 8   I was use before.
4. 7   because I don't know how to use the computure
5. 7   Sometimes is easy in the school.
6. 7   because it is my first time I'm use the computer
7. 6   I don't have to much Time
8. 10   For as I have computer at home, for me it was easy to use Wimba in my time available and in the comfort of my home.
9. 10   ! so easy!
10. 8
11. 10   because it's easy
12. 10

5. On a scale from 1 to 10 (1=very low, 5=average, 10=very high, etc.), please rate how easy it was to use the computer (=knowing how to use the computer and which buttons to click on the computer screen) to use the Wimba computer program and why you rate it this way.

Total/Average Rating number: **8.5**

1. 10
2. 10 For me is very easy to use that its links are very easy to open.
3. 5 Because is the first time I use the computer
4. 8 Last year take class and I use the computer.
5. 10 It is too easy.
6. 7 I need more practice
7. 6 I never use computer befor
8. 10 Because it is very easy to use the computer and buttons, is very friendly
9. 10
10. 8
11. 8
12. 10 Because the programs of the computer are easy. I studied of computer course.

6. Please write comments about the Wimba program that was used to do listening and speaking assignments for the class:

1. To use the wimba program it is fantastic and made the class more interesting
2. It was a good idea. So I thankful for my teacher.
3. It is very easy to use and is a very important source to learn English according with our mistakes.
4. I think need to spend more time on the computer
5. I like to use because I learn more.
6. It is a very good system and I like wimba
7. I need more practice
8. In general, I think the program Wimba, is very useful and versatile for use. It represents a great assistant for learning English because it reinforces class and explanations of the teacher.
9. about wimba program was Good for speaking assignments for the class.
10. I think wimbu program was good and will still be food for the future.
11. This is a way to learn, learn and speak I put my information in this program and the teacher check me whe I listen I learn better.
12. It is a very good program for speaking practice.

Appendix I - Wimba Instructional Materials Evaluation Results

ESL021 Assignments Evaluation

The instructor would like to know what student opinions about the different type of assignments in this ESL021 class are. Please complete the survey by sharing how you honestly feel.

Put an X in the box below the answer that best matches your opinion, and then write in any additional comments if you want. You do not need to put your name on this survey.

1. The type of question (look at the pictures below for examples) in which **I listened to the instructor speak and then repeated words or sentences** was helpful in improving my English.

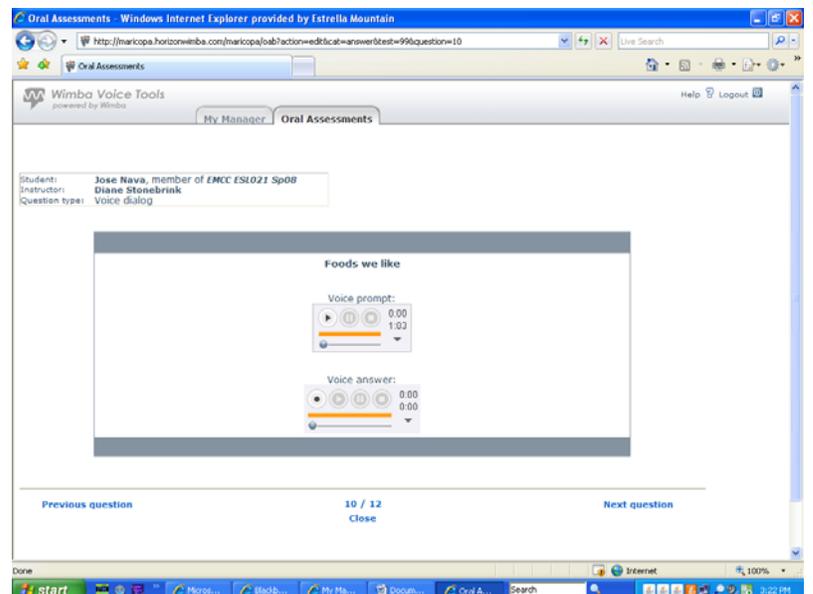| strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
6	3			

Additional Comments
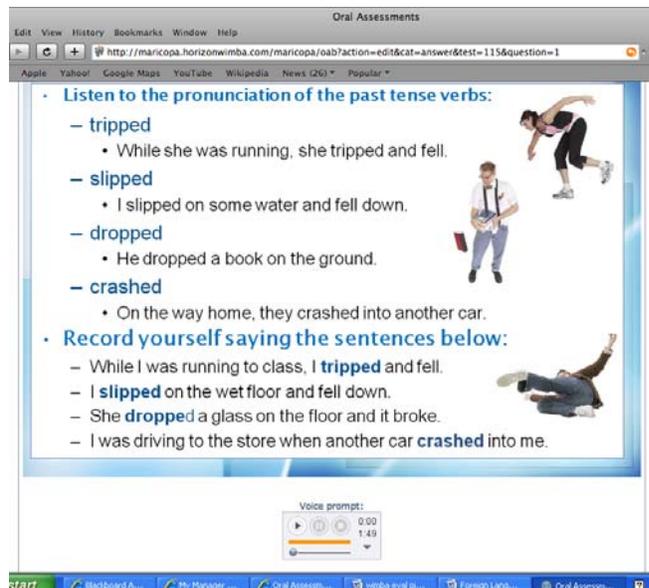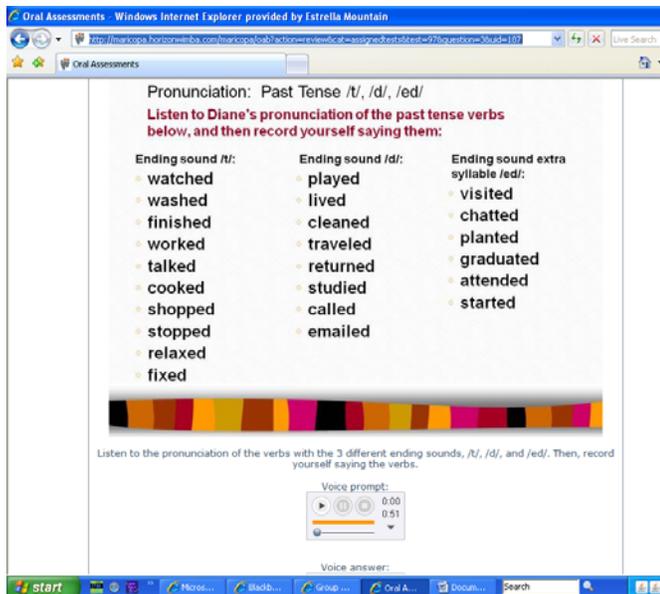
2. The type of question (look at the picture below for an example) in which **I listened to a question and then spoke a short answer (1-2 sentences)** was helpful in improving my English.

strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
6	3			

Additional Comments:
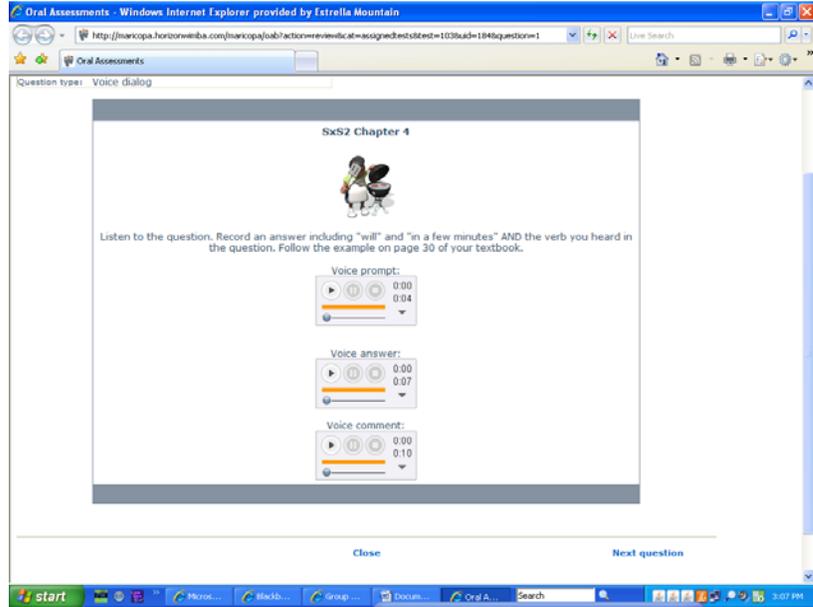
3. The type of question (look at the picture below for an example) in which **I listened to a question and then spoke a long answer (about a minute)** was helpful in improving my English.

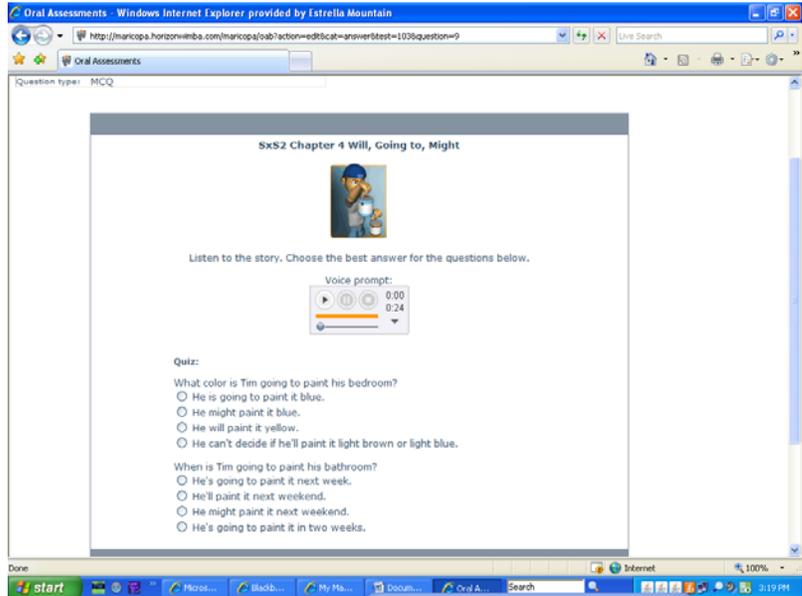| strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
6	2	1		

Additional Comments:

4. The type of question (look at the picture below for an example) in which **I listened to a question or story and then chose a written answer** was helpful in improving my English.

strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
7	2			

Additional Comments:

5. The type of question (look at the picture below for an example) in which **I listened to a question and then typed in a written answer** was helpful in improving my English.

strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
6	3			

Additional Comments:

6. The type of assignment (look at the picture below for an example) in which **I told a story and could listen to other students and ask questions** was helpful in improving my English.

strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
4	4	1		

Additional Comments:
(*only 1 student wrote in a comment*)
I don't have experience in computer, that take much time for my, and I don't have computer at home, so it was difficult for my because, I married and I have two jobs. But that system is good and interesting for lurn English if I have time and computer.