

**EPSY 317: INTERACTIVE LEARNING ENVIRONMENT  
GROUP PROJECT**

\*\*\*\*

# **EZTalk**

**STUDENTS: HAIBEI ZANG – HUONG HOANG  
- SPRING 2000 -**

## **INTRODUCTION**

English is the world language in the academic community as well as in other domains. Students in many countries in the world wishing to study abroad should have sufficient language skills in English.

Most of English learners expect to be able to speak English well. Good command of spoken English helps the speaker to transfer the information to listeners effectively. It also contributes to build a good image for the speaker as it shows professionalism, and therefore, ensuring his/her success. In addition, speaking English with the right pronunciation and intonation will help him to avoid ridiculous situations.

Materials and facilities for learning spoken English are abundant in the market. Many types of text books, tapes, video, CDs and spoken English classes are available everywhere. But students still complain that it is not easy to learn spoken English efficiently, and teachers say they do not have time to attend to every student.

Realizing the needs and the problems that the spoken English learners have, we have designed EZTalk with the aim to help them improve their spoken English skills.

## **EDUCATIONAL PHILOSOPHY**

The problems students often encounter in learning spoken English are:

- They are not sure whether they are doing it right or not if they practice alone. Many times they find they are speaking with correct pronunciation and accent, but their audience does not feel so. Therefore, learning spoken English from textbook, tapes or CDs is not sufficient. The students need somebody to be able to find out what is wrong in their speech and help them improve it. In other word, learning spoken English is a social activity that needs a community. Each student, when teaching his/her peer, may benefit from teaching as well as receiving teaching.
- Some students are too timid to practice speaking in class and in the community. As the result, they do not practice enough to improve their skill.
- With the limited time in class, the teacher cannot attend to every student to improve their speech.

Consequently, even though there are many materials and facilities to help learning spoken English, students and teachers still wish to have some other tools for them to improve their teaching and learning outcome.

With the objective to provide the best learning environment that can eliminate the above problems, we use cognitive apprenticeship and peer collaboration philosophies as the basis of the development of the software.

Cognitive Apprenticeship refers to the focus of the learning-through-guided experience and to the conceptual and factual knowledge that is situated in the context of their use (Collins, Brown & Newman, 1989). In our program, the computer will act as the expert and the model who will show students different contexts and their use, then guide the students through so that the students can find the underlying concept/rules in spoken English.

Cognitive Apprenticeship also requires extended technique to encourage the development of self-correction and self-monitoring skills (Collins, Brown & Newman, 1989). Our program offers opportunities for students to practice spoken English by themselves. They can record then listen to their own speech to and successively approximate with the model speech given by the computer until their own speech is close to it. Moreover, as a kind of teaching reciprocal, they can also listen to the pre-recorded speeches to find out the incorrect stresses or accent. Through this process, they can enhance their ability to self-correct their own speech.

Applying Cognitive Apprenticeship philosophy, we believe that the students can learn the concepts constructively and know how to use them in different settings. The advantage of technology here is it helps students to go through this process by themselves, thus saving a great deal of time for the teacher. Therefore, instead of giving dialectical lecture, the teacher can now spend that time for attending to each student through the discussion board – a facility offered by this software for social communication, to be described below. The interaction between the computer and the learner not only enables the students to learn as effectively as with a teacher, but also creates a more motivating environment than learning from a textbook. Opportunities for self-practice encourage the shy and timid students to be more confident because they can practice many times before speaking in public.

However, we also realize that speaking is a social activity and therefore learning to speak requires a social environment. Without the appropriate environment, the best tool for improving English speaking skill cannot ensure success in speaking. As stated above, the classroom setting does not offer sufficient opportunity for communication. Therefore, our program also wishes to supplement what the classroom cannot do through applying cooperative learning philosophy (Slavin et al, 1985; Kochman, 1996). The concept of cooperative learning is based on Vygotsky's theories which emphasizes on social interaction as the core of the developmental process and the asymmetrical interaction between partners who differ in their levels of ability. In our scenario, each student bring their own knowledge and skills into the classroom, some may be very good at pronunciation of individual word, some others may be good concepts, some other may be good at realizing the wrong accent and so on. Gathering together they may be able to help each other improving their skill. With this philosophy in mind, our program offers a discussion board, enabling each student in a group to record one's own voice for other members to comment on and help him to modify it if his speech needs improvement. Teachers can access to these discussion groups, observe their conversation and give feedback when necessary. Through this process, the teacher can find out the ability of each student easily and single out who need such special treatment, such as one-to-one

tutor, in order to spend more time with them. By this way, the technology has solve the problem of time that teachers often complain about, while still making sure that all students are progressing.

## **SCOPE**

Learning to speak English is a vast domain that can range from phonetics, grammar, vocabulary, to culture and history, etc. As the first step, we understand it is impossible to cover all these aspects in a product. Besides, learners also have different objectives. Many of them would like to focus on one aspect of the domain. Therefore, in this product we would like to aim at providing learners with opportunities to improve their pronunciation, stresses, intonation, and accent in the academic context. We believe that the academic situation requires standard English in various fields, such as business, technology, language and arts, etc. Once the standard English is acquired, according to cognitive apprenticeship theory, the students will be able to apply it in different settings.

Even though the phonetic skills are the emphasis of this package, it is very much up to the teacher to embed other aspects of language, such as vocabulary or grammar or listening or culture, etc, into their curriculum. In addition, other hyperlinks are also made available for students to refer to, such as websites for idioms, dictionary and games, etc., which can help them to find learning English is fun.

## **TARGET AUDIENCE**

International students of different backgrounds and experience who wish to improve their English speaking skill can benefit from this program. This package is suitable with learners from different levels. If they are beginners with English, they can start with phonetics, learning to pronounce each consonant and vowel, then each syllable, diphthong and stress in each word. As their English level rises, they will gradually learn how to put stresses and how to make the right intonation in a sentence in order to express their idea efficiently, how to make a conversation and how to deliver a speech.

As the context used in this software relates to academic community, it is more appropriate for students at the age of high school, college students and adults, but of course it is not limited to this population.

This package is particularly useful for the students who would like to improve their English speaking skill intensively because it creates a very suitable environment for learning this kind of skill. Using this package with the collaboration feature, the students are liberated from the constraints of the traditional class settings. They have more opportunities to learn with peers and learn from their teacher at their convenient time and their peers and teachers can also use their time more efficiently.

This web-based package, together with its collaboration ability, can be used by teachers who would like to organize distant learning for students from any part of the world. For example, English Department of the University of Connecticut commits to provide English speaking lessons for Vietnamese students under a cooperation agreement with a University in Vietnam. If they use this program, they can save a great deal of travel expenses while being able to deliver the good quality education. So distance is not a major problem for learning with this program.

Students who wish to improve their English skill by themselves can find this program relevant. However, it is not recommended to learn speaking without integration in a community.

## **STRUCTURE OF THE OVERALL SOFTWARE**

### **1. Contents and functions**

Within the scope mentioned above, this software includes lessons in:

- Phonetics
- Word Combinations and Sentence Patterns
- Discourse

Phonetics introduces the production of English sounds, including consonants, vowels, syllables and diphthongs

Word Combinations and Sentence Patterns teach the students how to pronounce individual words/sentence patterns with right stresses on certain syllables, and how the meaning of the word/sentence pattern change when it is pronounced incorrectly

Discourse introduces the way to combine all the words, and sentence patterns in to sentences to make a narration or a conversation for the most effective communication. This part teaches how to stress, how to apply the appropriate intonation of different kinds of sentence or question or answer. The types of sentences, questions and answers in this part of the software are diversified. Here is the list of topics we would like to include in this part:

- Comparing and Contrasting
- Lists and Series
- Choice Questions and Answers
- Tag questions and Answers
- Yes/No Questions and Answers
- Information Questions and Answers
- Repetition Questions and Answers

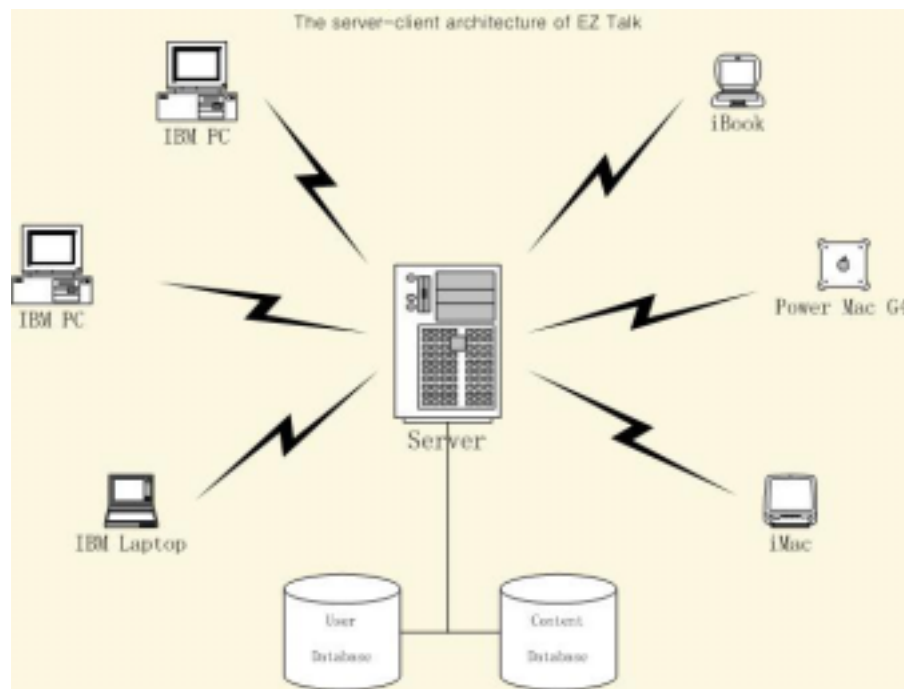
Each lesson can be divided into two parts. The first part is for students to learn the lesson by themselves, called Tutor. The second part is a discussion board for inter- and intra-group students to help each other learn better, called Network. In addition, a Notebook is

also made available for them to note down what they would like to memorize and review afterwards.

Besides these lessons, the software also provides other resources such as dictionary, a personal notebook with bookmark feature, reference book of grammar and idioms.

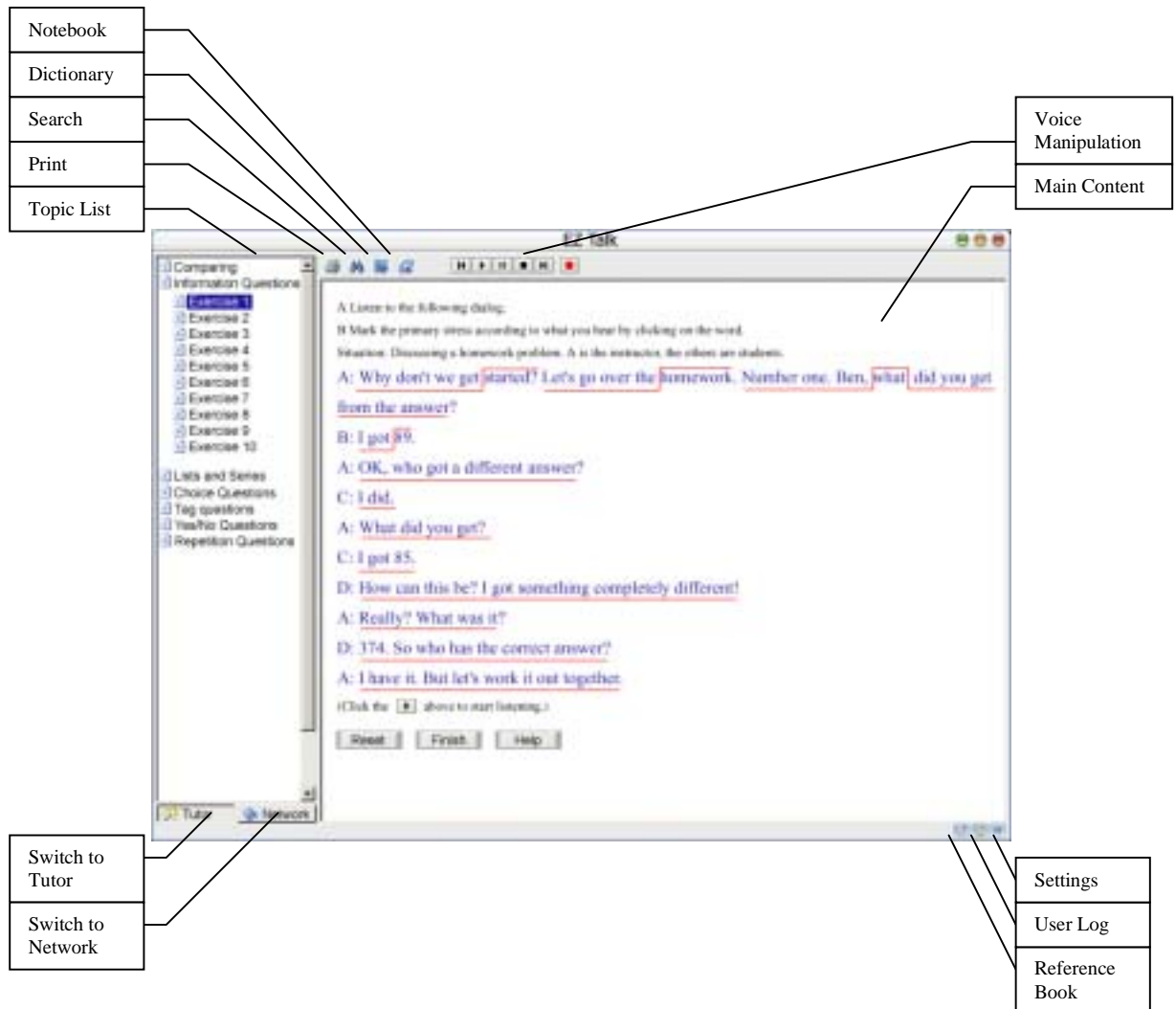
## **2. Technical architecture**

This software is based on a client-server model with distributed client programs and a central server backed by a user database and a content database. The instructor has the access to the server and databases. The user database stores users' ID, their activity and performance log, and uploaded audio files (for purpose of log-in/out, management and assessment). The content database stores the content of the "Tutor" part which the instructor may create or edit.



### 3. Visual interface

The following screen-shot shows its main interface and components of the client program:

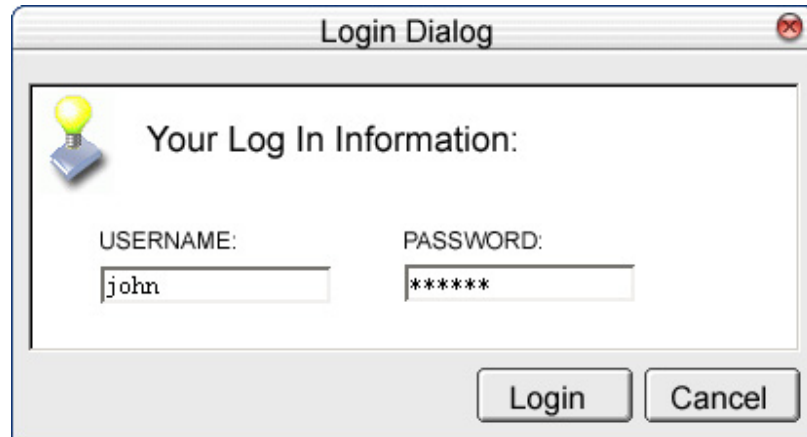


(Picture 1: Main Interface)

The interface of "Network" part is similar. The difference lies in the "Topic List area" which shows a list of discussion threads and topics in stead.

## ACTIVITIES

First, every user needs to obtain a user ID (with password) from the instructor to log in to the software.



Login Dialog

Your Log In Information:

USERNAME: john

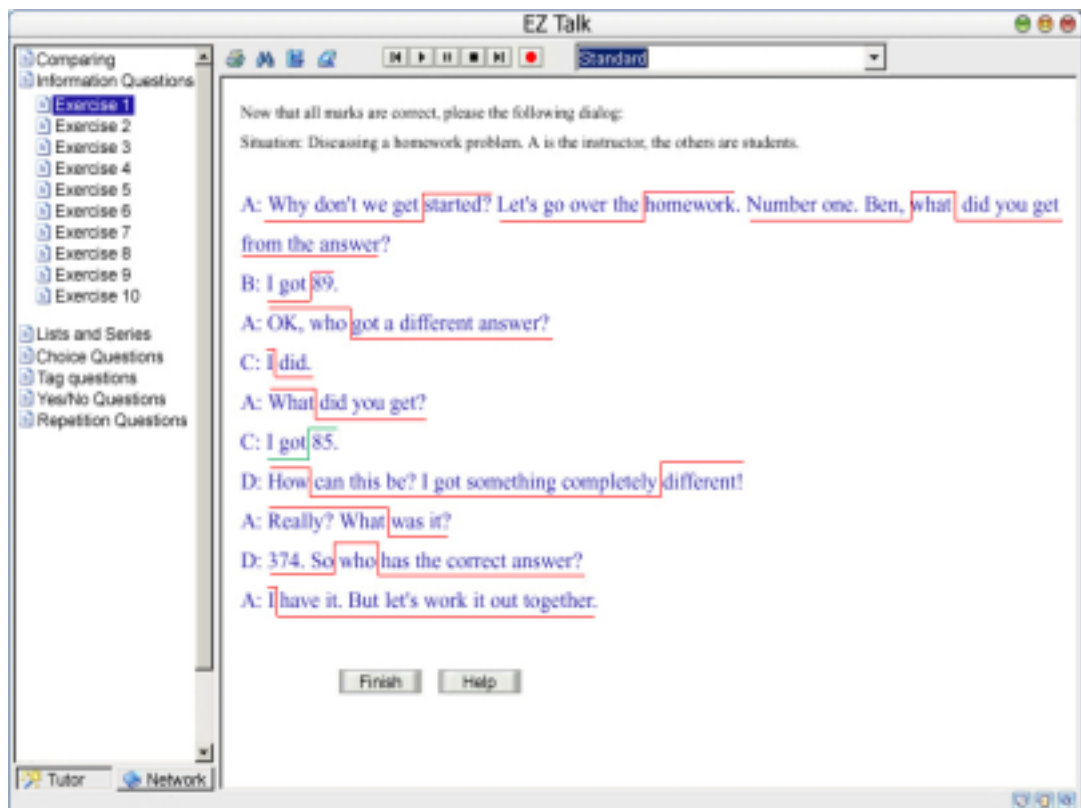
PASSWORD: \*\*\*\*\*

Login Cancel

(Picture 2: Log-in Dialog)

### 1. The Tutor Function

By default, the user will be shown the “Tutor” part of the software, if a log-in is successful.



EZ Talk

Standard

Comparing

Information Questions

Exercise 1

Exercise 2

Exercise 3

Exercise 4

Exercise 5

Exercise 6

Exercise 7

Exercise 8

Exercise 9

Exercise 10

Lists and Series

Choice Questions

Tag questions

Yes/No Questions

Repetition Questions

Tutor

Network

Now that all marks are correct, please the following dialog:  
Situation: Discussing a homework problem. A is the instructor, the others are students.

A: Why don't we get started? Let's go over the homework. Number one. Ben, what did you get from the answer?

B: I got 89.

A: OK, who got a different answer?

C: I did.

A: What did you get?

C: I got 85.

D: How can this be? I got something completely different!

A: Really? What was it?

D: 374. So who has the correct answer?

A: I have it. But let's work it out together.

Finish Help

(Picture 3: Tutor function --- Start)



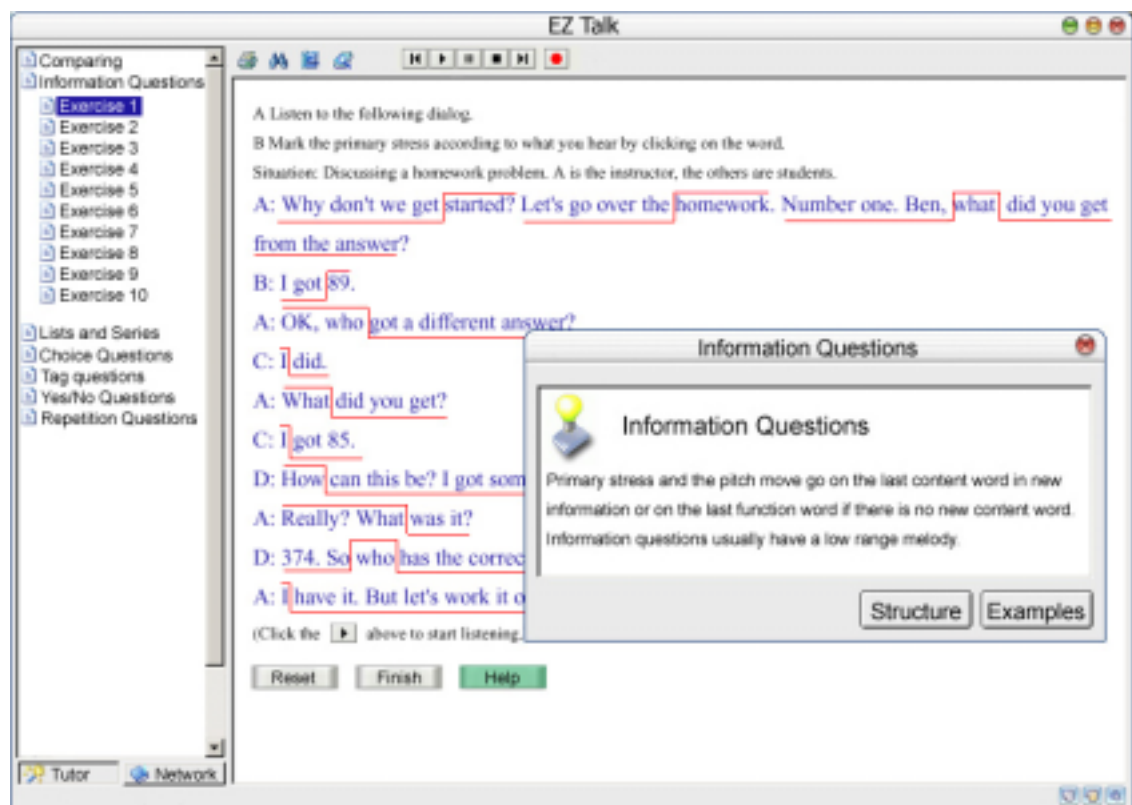
As shown in picture 3, the user will first choose a topic from the topic list in the left frame. By expanding one of the topics, the user will then choose an exercise and will see the interface as above.

The user's very first task is to click the "Play" button to let the computer play the audio recording of the whole paragraph or dialog. Then, the user is required to make marks on primary stresses of each sentence (the red lines). The initial status of these red lines is flat and below all words (see picture 1). Stresses are marked simply by clicking each word to raise that segment of the red line.

The user may click "Reset" to reset all red lines to initial status.

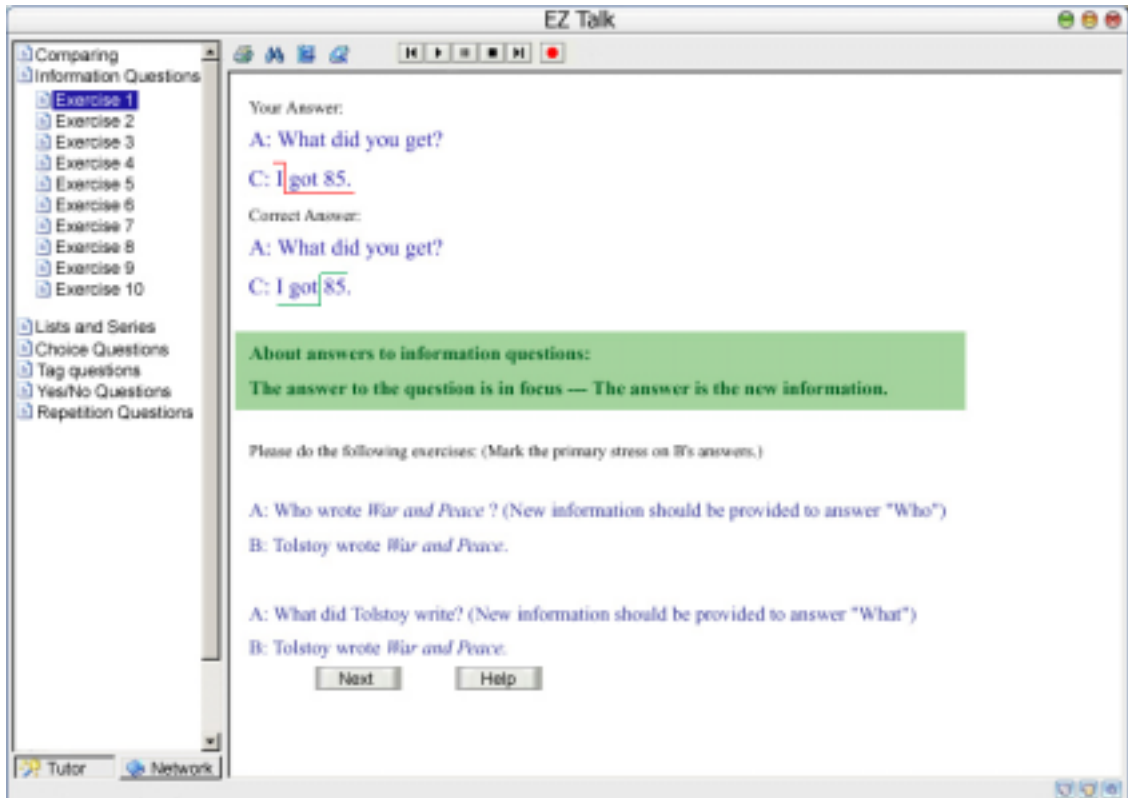
The user may click "Finish" to proceed to next step.

The user may click "Help" to take a relative lesson on this topic.



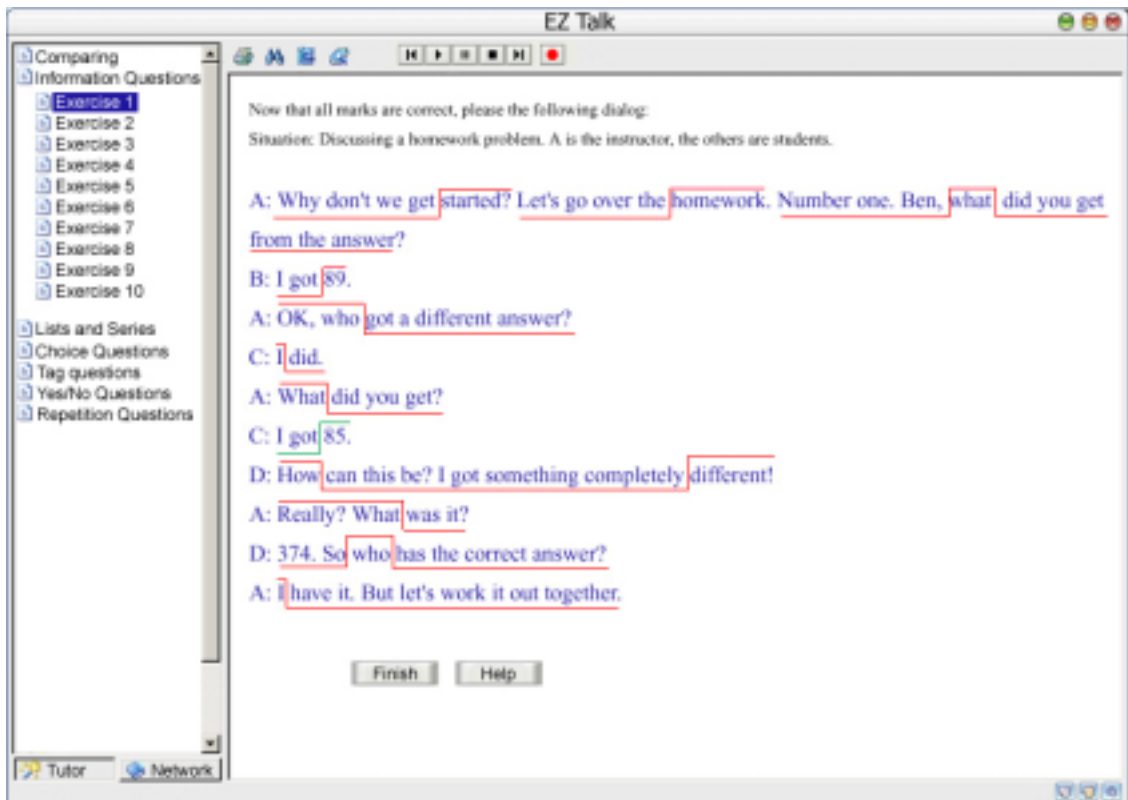
(Picture 4: Tutor function --- Relative lesson)

After the user has finished all marks, he/she will click "Finish" to proceed. The computer will go over each sentence and analyze the user's answer.



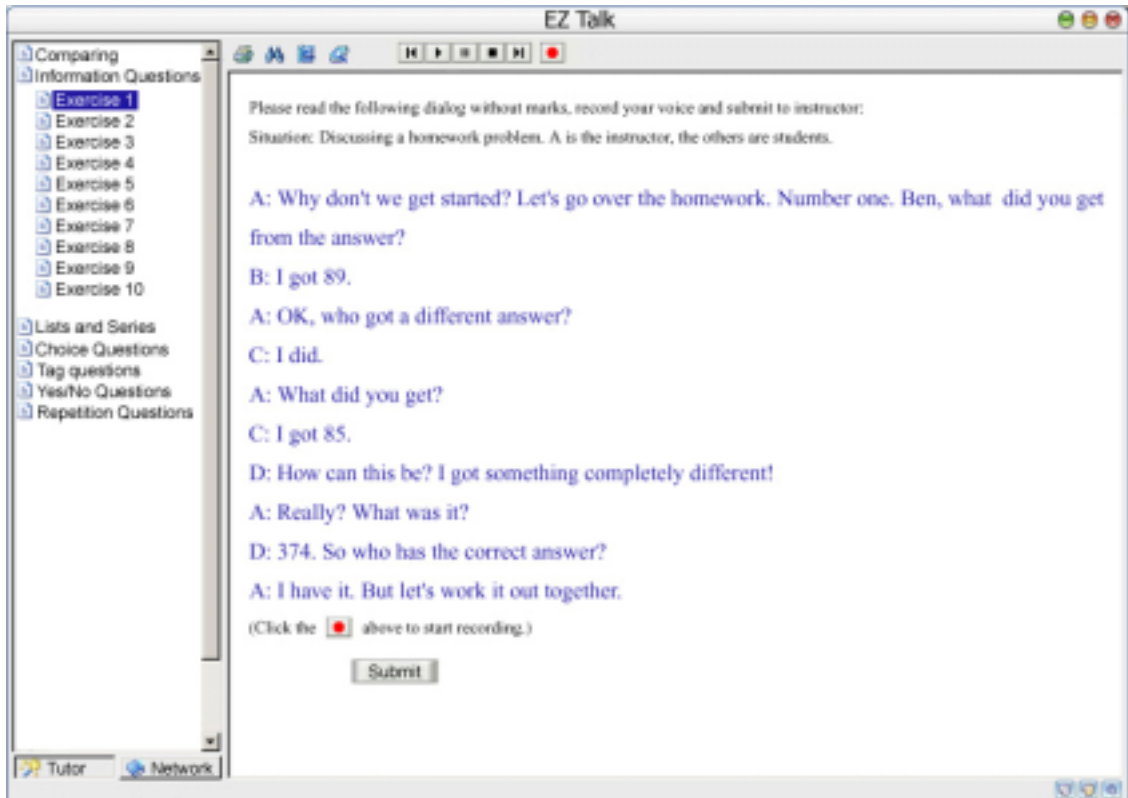
(Picture 5: Tutor function --- tutoring)

If the user's answer is wrong, the computer will show user the correct answer, key points in making the correct answer (in the green rectangle), and provide user with further tutoring based on this mistake. In this step, the user will exercise on answering similar questions with hints. If the user has corrected the misconceptions, the computer will proceed to review the next sentence. After all answers have been reviewed (when computer assumes that the user master all skills in this topic), the computer will proceed to next step --- practice reading.



(Picture 6: Tutor function --- practice reading)

In this step, the user is required to read the whole paragraph with assistance of all correctly marked stresses. The user will be able to playback his/her voice or the computer's voice to compare the difference and re-record theirs until they find the gap is eliminated. Some other pre-recorded "defective" speech may be available to help students to find out typical mistakes. The user will then click "Finish" to proceed to the final step -- submitting to instructor.

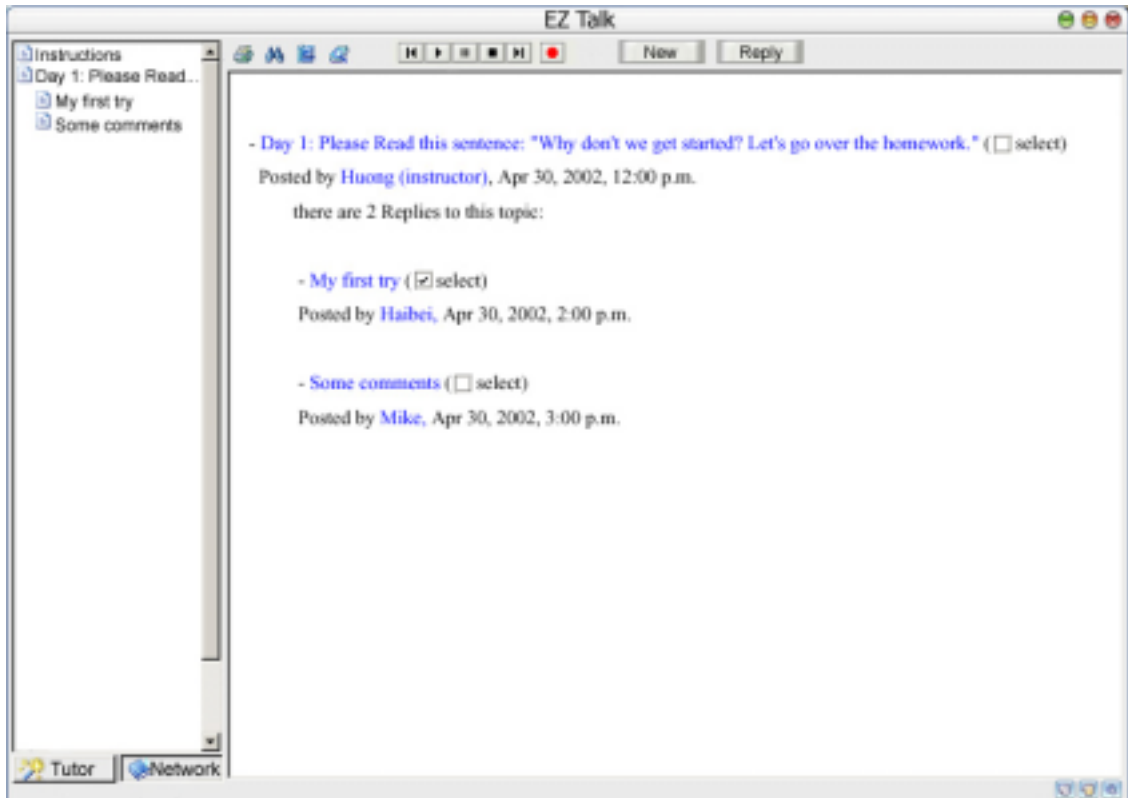


(Picture 7: Tutor function --- Submitting to instructor)

Because the human voice recognition technology is still in its cradle, the user's performance needs to be finally evaluated by the instructor. This software provides a direct channel between each user and the instructor. In this last step, the user is required to read the whole paragraph or dialog without assistance of marked stresses, then he/she will have the option to record the audio, and submit the audio file to the instructor via computer network. The instructor will have the permission to set this property of the exercise unit whether the final submission is required or not. The audio files are transferred to the central database to which the instructor has the access.

## **2. The Network Function**

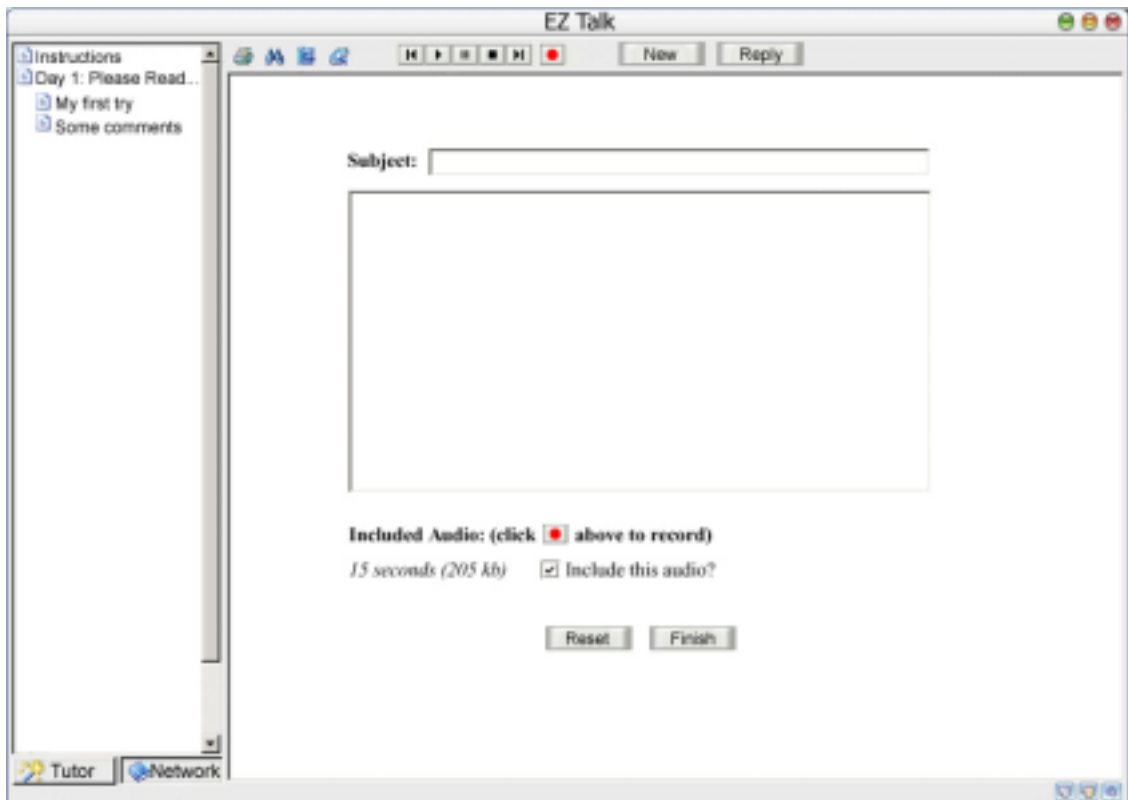
The network function is an enhanced web board with limited access permission for registered users and the instructor. Students may attach voice recordings, comment on others', or do instructor's assignment on reading.



*(Picture 8: Network function --- Threaded discussion view)*

Like normal web boards, the interface includes a list of discussion threads and topics, and a main area displaying the content of each post. This web board is audio-enhance, which means not only text, but also audio can be recorded and uploaded as a part of a post. To listen to others' audio recording, simply check the checkbox adjacent to that checkbox and click "Play" button.

To compose a new post or reply to another one's post, click "New" or "Reply" (a post must be checked for the Reply button to take effect) and the user will see the following window:



(Picture 9: Network function --- new post composing)

In this window, the user may record and attach an audio file as well as compose the text message.

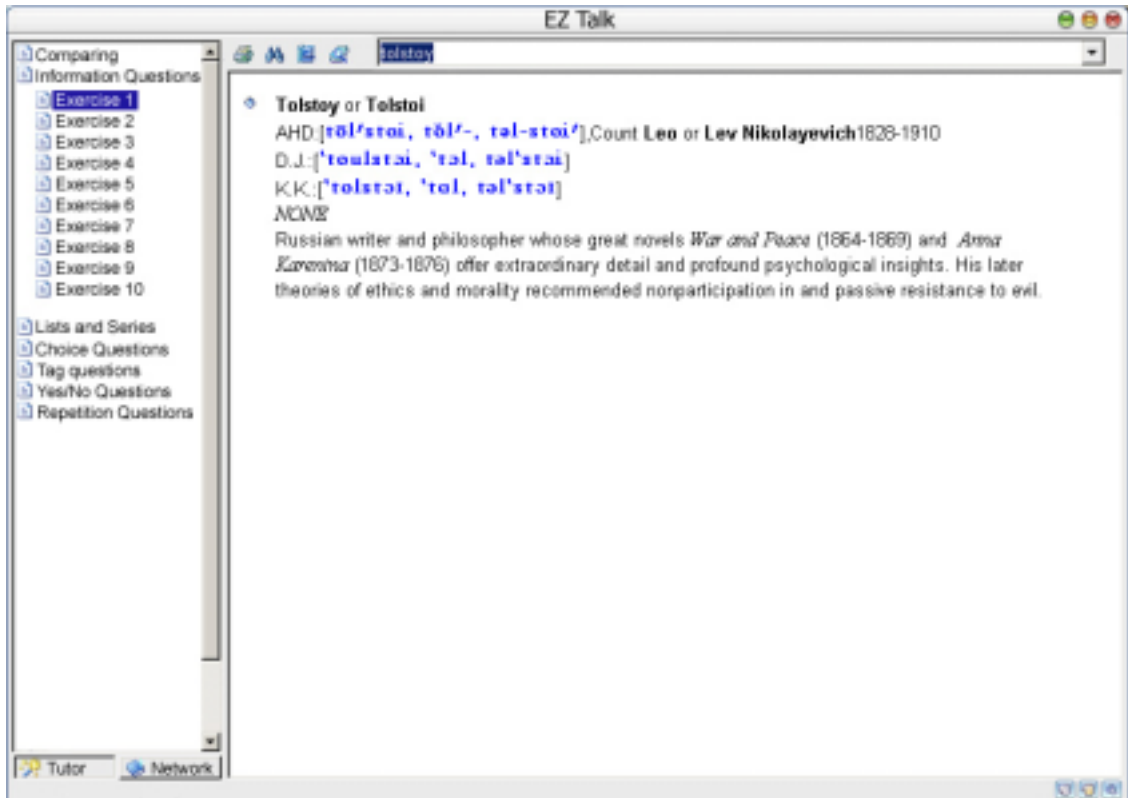
### **3. Utilities:**

Following utilities are available to assist users' learning:

a. *Electronic dictionary:*

When the “capture” mode is activated by clicking the “electronic dictionary” button, the computer will “extract and explain” any English word appearing in the software where the mouse is clicked.

User may also manually input the word into the input field and find its meanings.



(Picture 10: Utilities --- electronic dictionary)

- b. *Search*  
This function allows users to search for key words in tutoring materials or online discussion postings.
- c. *Notebook*  
This function allows users to put down any notes as well as bookmarks of any page in the tutor function as a fast access to them.
- d. *Print*  
To print the content in the main display area.
- e. *Reference Book*  
This resource contains knowledge about English grammar, idioms and phrases, information about studying abroad
- f. *Activity Log*  
A log storing a user's each log-in time, log-out time, time spent on each part of the software, and the performance.
- g. *Settings*  
Settings of visual interface and sounds

## **ASSESSMENT**

The software package can facilitate the assessment process by each individual, the instructor, and peers.

### **1. Criteria of assessment**

Pronunciation  
Positioning of stresses  
Articulation  
Delivery of main points  
Speed of speech

### **2. Method of assessment**

a. Each student may assess his/her outcome of learning by comparing his/her speech with the standard speech, in each exercise which is set as “practice”. He/she may view this assessment result in the “Activity log”.

b. The instructor may assess each student’s outcome of learning in each exercise unit which is set as “test”.

c. The instructor can also do so through observing (Schunk,2000) the discussion, and inquiries posted to the instructor on the forum . This discussion and the inquiries represent the externalization of student’s internal thoughts, so they are very effective tool to measure how much the students learn.

d. After using the software, the students will be given an attitude questionnaire to collect following information:

- Ease of use (in each component of the software)
- Effectiveness (in each component of the software)
- Achievement of personal expectation

## **CONCLUSION**

There are extensive needs for non-native English learners to improve spoken English skills. It is usually inefficient for both instructors and learners to learn spoken English in traditional classrooms or learning media. Based on cognitive apprenticeship and peer collaboration philosophy, we have made this proposal to develop this interactive learning software. We hope this software will substantially meet the needs.



## **REFERENCES**

Collins, A., Brown, J. S., Newman, S. E. (1989). Cognitive Apprenticeship: Teaching the crafts of reading, writing and mathematics. In L. Resnick (Eds.), *Knowing, Learning and Instruction, essays in Honor of Robert Glaser*. Erlbaum, Hillsdale, NJ.

Collins, A. (1991). Cognitive Apprenticeship and instructional technology. In L. Idol and Jones, B. F. *Educational values and cognitive instruction: Implications for reform*. Erlbaum, Hillsdale, NJ.

Hahn, L., Dickerson, W. (1999). *Speech Craft*. The University of Michigan Press.

Koschmann, T. D., Myers, A. C., Feltovich, P. J. & Barrows, H. S. (1994). Using technology to assist in realizing effective learning and instruction: A principles approach to the use of computers in collaborative learning. In the *Journal of the learning sciences*, 3(3), pp 227-264.

Puntambekar, S., Nagel, K., Hübscher, R., Guzdial, M., & Kolodner, J. L. (1997) Intragroup and Intergroup: An exploration of learning with complementary collaboration tools. In R. Hall, Miyake, N. & Enyedy, N. *Proceedings of the CSCL conference*, pp. 207-214

Scardamalia, M., & Bereiter, C. (1994). Computer support for knowledge building communities. In the *Journal of the learning sciences*, 3(3), pp. 265-283.

Schunk, D. (2000). *Learning theories: An educational perspective*. Upper Saddle River, NJ: Prentice Hall.

## **INTERNET RESOURCES**

<http://203.162.5.45/idioms/default.asp> - idioms

[www.english-to-go.com](http://www.english-to-go.com)

[www.cobuild.collins.co.uk/wordwatch.html](http://www.cobuild.collins.co.uk/wordwatch.html) - Word watch

[www.wordplace.com](http://www.wordplace.com) - Grammar

[www.english-to-go.com](http://www.english-to-go.com) - Teaching International English from current Reuters News Stories

<http://www.bbc.co.uk/worldservice/learningenglish/news/> - Learning English BBC World wide service

<http://www.aelf.com/cgi-bin/aelf/courses.cgi> - American English Foundation Courses