

# The Application of New Educational Media in the English Program at Takaoka National College

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## ABSTRACT

In the world of education, most experts agree that there will be a major shift away from the traditional teacher-centered learning model to a more student-centered paradigm that requires more initiative on the part of the student. Paralleling this change, we will be forced to make use of technological advances to find more efficient ways for learning and teaching to take place. The increasing use of interactive CD's, low-cost telecommunication services, hypermedia, and other multimedia technologies all seem to indicate that teachers will increasingly place more emphasis upon curriculum and materials development in order to make the best use of rapidly improving educational media; as a result, the kinds of activities and exercises taking place in the classroom will also be fundamentally altered.

In the English section of the Languages for Business department, we have also been trying to identify ways to apply new educational media to improve the learning/teaching process. This paper will describe our experiments with Electronic Mail and Hypermedia-based Computer Assisted Language Learning authoring programs. The basic instructional model for tutorial-based Computer Assisted Instruction will be introduced, and its general impact upon classroom instruction discussed.

## KEY WORDS

E-Mail; Synchronous E-Mail; Asynchronous E-Mail; Latrobe University E-Mail Listserver; Server; Hypermedia; Individualized Instruction; Computer Assisted Language Learning (CALL).

## 1 Electronic Mail

### 1.1 Introduction

Electronic mail has been used in foreign language teaching now for quite some time; it is said to be effective in reducing student anxiety levels for several reasons. First,

it provides students with a risk-free learning environment in which the teacher is transformed from an authority figure to a knowledgeable colleague. This is especially important when teaching Japanese students, who generally will not raise their hands to ask questions in the classroom even if they do not understand. Research has shown that student participation rates increase drastically irrespective of the form of electronic mail chosen. Also, E-Mail offers students the chance to use their writing skills for meaningful communicative tasks, thus encouraging them to freely experiment with written English; since the textbooks that we select for classroom use often fail to provide anything but artificially contrived communicative tasks, E-Mail can perform a very important function in writing instruction.

### 1.2 Synchronous and Asynchronous E-Mail

There are basically two forms of E-Mail communication: synchronous and asynchronous. Synchronous, or "real-time" connections require special software that allows participant input to be immediately visible to everyone. Asynchronous electronic mail, on the other hand, involves exchanges of electronic messages that do not occur at the same time. The lags between when a message is sent and when it is actually received and read can vary drastically.

For foreign language students, asynchronous communication often takes place in the form of E-Mail pen-pal exchanges. While they seem to be effective, they have two major weaknesses: 1) Students often do not receive an immediate response to an E-Mail message that they send to a pen-pal or list server. Indeed, they sometimes do not get responses to their messages at all, leaving them extremely frustrated, and raising their affective filters even higher. 2) Pen-pal exchanges often lack a clear purpose, leaving the students with very little to discuss with each other. When this happens, students find it difficult to focus, and often lose interest.

This year, we began experimenting with asynchronous E-Mail exchanges through Latrobe University's E-Mail listserv. Each student in the Freshman class subscribed to the "General Discussion" list. Hundreds of non-native English speakers from all over the world have subscribed to this list server, and daily E-Mail message traffic has been extremely heavy. Although the overwhelming majority of our students enjoyed participating in this project, they were often disappointed when their messages were not answered promptly or the subjects discussed on the list remained on a very superficial level. It was clear that we had to search for more appropriate ways for students to make use of this essential new media. A reexamination of the procedures used has given me several new ideas for improvement.

### 1.3 Some Ways to Make Better Use of E-Mail

Undoubtedly, the best way of making use of E-Mail would be to experiment with a wide range of both kinds of E-Mail. While synchronous systems seem to have more

merit in general, I feel that we can also be successful with asynchronous E-Mail if we remember to: 1) get multiple pen-pals for each of our students; and 2) conduct exchanges with other classes in foreign countries instead of joining listserver-type discussion lists. If this is done, students will have plenty of chances for interesting and meaningful interactions with native and non-native speakers without the overwhelming anonymity of a listserve discussion group.

Simultaneous exchanges of information--whether occurring within TNC's LAN or externally through a MOO (an electronic facility for real-time discussion and simulation)--provide a high degree intrinsic motivation that encourages students to write. Using telnet, students can participate in a MOO called "schMOOze university" that is specially designed for non-native speaking students of English and their teachers. So far, teachers and students that have participated in it claim that it is very effective.

Synchronous exchanges of information within TNC's LAN appear to be possible only if special software packages such as the "Daedalus Integrated Writing Environment" (DIWE) prove to be financially viable. DIWE has been successfully adopted for use in writing classes at Nanzan University in Nagoya and Gifu University in Gifu. I have asked permission from the English departments of both universities to examine the software in the near future.

## 2.0 Hypermedia-based Computer Assisted Language Learning

Through years of experience as a classroom teacher, I have observed that students progress through the material presented during classes at different rates, making it necessary for the instructor to provide individualized instruction to those who may not be able to understand the content of a particular lecture or presentation. Since classroom time is so limited, providing tutorial services to individual students who have fallen behind should be minimized to the extent that this is possible. One of the best tools available for minimizing the amount of tutorial one-to-one student-teacher interaction in the classroom is to provide Computer Assisted Language Learning (CALL) software that students can use at their own pace.

In the form of drill-and-practice programs, computer-based instruction has been around for a long time. Unfortunately, many older CAI or CALL programs that I have seen or used were little better than textbooks because their presentation was done without today's graphical user interface, and it did not provide access to the pictures, movies, and sounds of today's computers. While the early CALL programs may have had their use as drill-and-practice programs, they were inherently limited by their inability to convey the context in which the language was being used. Recently, however, the computer has been able to offer us audiovisual media that immensely enhance and enrich the learning process by providing students with the situational and pragmatic knowledge that comes with the context in which the target language is being used. For example, the use of digitized video clips is almost indispensable when teaching

something as inherently complex as American culture.

The effectiveness of interactive multimedia is enhanced even further in "hypermedia" programs that make it possible to freely link text to the various kinds of media. Importantly, "hypermedia" programs also allow the user to navigate through information by using text as a graphical interface. It is for this reason that hypermedia authoring programs are more desirable than others for the purpose of creating multimedia Computer Assisted Language Learning (CALL) software. Recognizing this, we have selected an authoring program called Hypercard to develop CALL software for student use on the Macintosh computers in the media room.

We have been developing drill-and-practice software that provides supplemental listening exercises for use by the non-native English speaking teachers. In addition to this, the software also gives students practice with some essential reading skills, such as skimming, guessing meaning of individual words from the context, etc. This should make it possible to spend less classroom time conducting repetitive listening drills. We hope to finish the first collection of listening/reading software programs by mid 1996 and put them onto CD ROMs for student use.

Soon after this, I hope to begin working on software that makes use of digitized video and sound. When completed, the software would combine traditional drill-and-practice exercises for vocabulary building with tutorial presentations that help students understand the movies content at a discourse level. The drill-and-practice sections would include bilingual on-line dictionaries that would also give students the opportunity to hear native pronunciation of selected words and phrases.

As a teaching tool, these software programs promise to greatly enhance our ability to effectively teach students about American and English culture. While I presently use a combination of textbook and films to teach our students about important topics or issues in contemporary American culture, I often feel that this approach is inadequate for two reasons: 1) Students have trouble understanding the basic story line without having spent a considerable amount of time studying difficult vocabulary words and phrases. I believe that this kind of study is most efficiently done by the individual students themselves, ideally with the aid of a tutorial software program. 2) To grasp the total meaning of certain scenes from the movies they are shown, these sections of the film must be replayed several times. In the classroom, although most students may find the explanations and repetition helpful, many students inevitably find it to be boring. Obviously, tutorial software also seems to be the most appropriate way to teach this information.

From left to right, the first step in this flowchart is the presentation of information to the student. First, students should be provided with clear instructions on how to proceed with the tutorial, and what the student is supposed to learn. Then, the information to be learned should be presented in the appropriate form: text, graphical or digitized movie clip.

## Flowchart for a Tutorial CALL Lesson

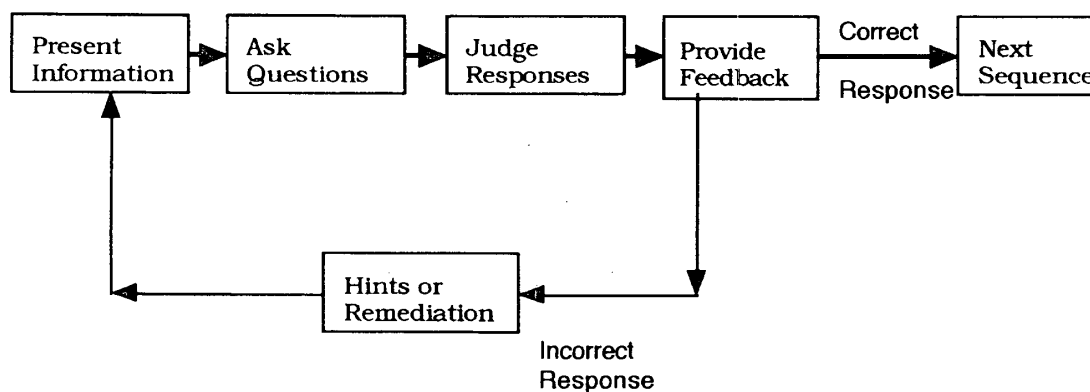


Fig. 1.

To verify student mastery of the material, students are then asked comprehension questions. It is necessary to put a lot of time and energy into designing questions for which both correct and incorrect student answers would be easily predictable. Answers that indicate the student did not understand the material presented would provide the student with a sequence of remedial tutorial screens, while correct answers would send students directly to the next sequence of questions.

The ultimate goal of a tutorial software program is to produce complete student mastery of all the material presented. It is useful because it allows students to proceed at their own pace in a non-threatening environment. If well-designed, it can provide just as much feedback and effective instruction as any one-on-one private teacher to student lesson. The primary drawback is that it takes an enormous amount of time and energy to develop tutorial software. For each hour of tutorial software that it takes a student to complete, approximately 200 hours of programming and design work are normally required.

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## 本学英語教育における教育用メディアの応用について

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### 要 旨

伝統的な教師中心の学習形態から、学生側がより主体的に参加する学生中心の学習の枠組へと大きな転換が予想されることは教育界で大方の認めるところである。この変化に伴い、我々はより効率の高い教授・学習の成立を目指して、高度なテクノロジーの応用を迫られる。双方向対応のCDや低コストの通信サービス、ハイパーメディア、その他のマルチメディアの利用が次第に進むにつれ、急速に進歩するこれらの教育用メディアを活用するため、教師はそれに応じたカリキュラム及び教材開発に一層主力を注ぐことになる。結果として教室内での学習活動も大きく変わる。

本学ビジネス外語専攻、英米コースでも、教授・学習過程での新しい教育用メディアの利用法を模索してきた。本稿はこれまでの試行における電子メールの利用、更に、ハイパーメディアに基づくコンピュータ支援語学学習の教材作成について、また、個別対応型のコンピュータ支援学習指導のモデルについて述べ、その指導の効果に触れる。

### キーワード

Eメール、同時型Eメール、非同時型Eメール、ラトローブ大学Eメール・リスト・サーバー、サーバー、ハイパーメディア、個別化指導、コンピュータ支援言語学習 (CALL)