Table of contents

Detailed table of contents

Foreword

This book has been produced under the auspices of the Thailand-Australia Science & Engineering Assistance Project (TASEAP).

TASEAP is a development cooperation project between the Royal Thai Government (through the Ministry of University Affairs) and the Australian Government (through the Australian Agency for International Development/AusAID). The project is managed on behalf of the Australian Government by SAGRIC International Pty Ltd.

The goal of the project is to assist the Royal Thai Government increase the numbers, and improve the quality of, science and engineering undergraduates in the public university system. As one contribution towards this goal, the project includes a focus on the English language skills of science and engineering lecturers and students.

In its English component, TASEAP has concentrated its efforts on an approach which has considerable promise for boosting the motivation and learning effectiveness of adult learners, namely computer-assisted (or computer-mediated) language learning. A number of strategies have been used:

TASEAP has supplied 19 universities with multimedia English language software, namely the *Real English* series and the *Wiser English* series. These programs focus on General English and are suitable for adult learners, providing both extensive practice and remediation.

Recognising that little software is commercially available which meets the specific needs of science and engineering learners, TASEAP has also supplied each university with an authoring program *Wiser Educator,* together with a site licence for its unrestricted use within each university. TASEAP has provided training to Thai English language lecturers in the use of this authoring software.

In addition, the project has selected an experienced Thai lecturer, Assistant Professor Dr. Sasi Jungsatitkul from Khon Kaen University, to design and produce a unit of multimedia material in English for Science and Engineering. She has completed this task under a TASEAP Fellowship Program at Monash University in Melbourne Australia, using the *Wiser Educator* authoring program and with the technical support of Wiser Software (Melbourne). This material is presented as a set of CDs and will be distributed to TASEAP universities in November 1999. The material is intended for self-access use by science and engineering students and lecturers. It is also intended for English language lecturers, both as a sample of the kind of ESP (English for Specific Purposes)

material that can be produced, and as a resource bank for the production of additional multimedia materials by English language lecturers.

A further five lecturers were selected from TASEAP universities as English Language Fellows to focus on producing staff-development resources for their English language lecturer-colleagues. They comprise: Asst. Prof. Dr. Puangpen Intraprawat (Suranaree University of Technology), Asst. Prof. Dr. Bamrung Torut (Silpakorn University), Dr. Kitima Indrambarya (Kasetsart University), Mr. Wichai Kritprayoch (King Mongkut's University of Technology Thonburi), and Mr. Snea Thinsan (Chiang Mai University). Together they have produced this resource book, which is intended for English language lecturers at TASEAP universities.

In this resource book, every effort has been made to provide information and insights that are (i) easy to understand (even for lecturers with relatively little experience with computers), (ii) practical, and (iii) relevant to Thailand. The authors of this resource book do not position themselves as *advocates* of computer-assisted language learning: indeed, they recognise both the advantages and the limitations of computers in the language-learning process. Instead, their stance has been exploratory. The book aims to encourage English language lecturers to themselves explore the use of computers. It aims to encourage and empower Thai English lecturers to use computers more frequently, more efficiently, and with greater confidence than before.

Like the *English for Science & Engineering* CD, this resource book has been produced within a total period of six weeks, which is a truly remarkable achievement which reflects the skill and dedication of its authors. If its readers apply themselves with similar vigour to its contents, then TASEAP will indeed have achieved the boost it set out to encourage. We wish you pleasant (and useful) reading.

This resource book is being presented to TASEAP universities in November 1999.

Kerry O'Sullivan
English Language Adviser, TASEAP
November 1999

1 Computer assisted language learning: an overview

Bamrung Torut

"….Technology is not a panacea or a magic bullet that suddenly transforms all learning. The effectiveness of educational technology depends on how it is employed to meet educational goals for particular kinds of students in specific language learning environments…." (Oxford and others, 1998: 13)

INTRODUCTION

The main purpose of this chapter is to give Thai university English language teachers a brief overview of the development of Computer-Assisted Language Learning (CALL) and how computers have been used or can be used for English language teaching (ELT) and learning. Its focus is on the history of CALL, uses of CALL in English language teaching, and advantages and limitations of CALL.

The chapter is divided into 5 sections: (1) Definition of CALL, (2) History of CALL Development, (4) Uses of CALL in English Language Teaching, (5) Advantages and Limitations of CALL, and (6) Tips in using CALL. A CALL bibliography (printed materials and online resources), as a resource for interested ELT teachers, is available at the end of the book.

Definition of CALL

Computer-Assisted Language Learning (CALL) is defined as "the search for and study of applications of the computer in language teaching and learning." (Levy, 1997: 1) The main aim of CALL is to find ways for using computers for the purpose of teaching and learning the language. More specifically, CALL is represented by the use of computer technologies that promote educational learning, including word processing, presentation packages, guided drill and practice, tutor, simulation, problem solving, games, multimedia CD-ROM, and internet applications such as e-mail, chat and the World Wide Web (WWW) for language learning purposes. There are several terms associated with CALL. CALL is variously known as Computer-Aided Language Learning (CALL), Computer-Assisted Language Instruction (CALI) and Computer-Enhanced Language Learning (CELL). The first two terms generally refer to computer applications in language learning and teaching, while CELL implies using CALL in a self-access environment (Hoven, 1999).

Why CALL?

The reasons why ELT teachers use CALL:

- Computers can do some of the work of the teacher and provide great assistance to the learner even without the presence of the teacher (Pennington and Steven, 1992).
- New technologies have seen computers become smaller, faster, and easier for the teacher to use (Evy, 1997). At present, well-designed CALL software is readily available to the teacher.
- Technologies allow computers to do multimedia applications, incorporating video, sound, and text, and this capacity allows the learner to interact with both the program and other learners. (Felix, 1998).
- The computer offers great flexibility for class scheduling and pacing of individual learning, choosing activities and content to suit individual learning styles. (Oxford and others, 1998)
- The computer can provide a meaning-focused, communicative learning environment, which serves the purposes of communicative language teaching.

HISTORY OF CALL DEVELOPMENT

This section gives a brief history of CALL development. The review aims at showing, chronologically, the development of CALL over the last 30 years by linking to important technological developments, theories of learning and language teaching approaches. Some key examples of CALL programs and projects developed in this period are also shown.

Warschauer (1996) divides CALL into phases of development as follows: Behavioristic CALL, Communicative CALL, Integrative CALL (Multimedia CD-ROM), and Integrative CALL (internet). The beginning of a new phase does not necessary mean the end of programs and methods of the previous phase, rather the old is included within the new (Warschauer, 1996).

The historical development of CALL is summarized in the tables which follow:

Behavioristic CALL

Main-frame and Mini Computers (1950s-1970s)		
Technological Development by Year	**Approaches to Language Teaching**	**Approaches to CALL & Examples**
• 1950 - Mathematician and computer pioneer Alan Turing predicted that one day there would be a machine that could duplicate human intelligence in every way. • 1951- Whirlwind, the first real-time computer was built. • 1957- FORTRAN language was developed. • 1959-COBOL (Common Business-Orientated Language) was developed. • 1960-Tandy Corporation founded. • 1964-DEC Mini Computer was built. • 1965-BASIC language was developed. • 1967-Development on PASCAL • 1968-LOGO language was developed. • 1970-Development of UNIX operating system. • 1971-First Microprocessor-4004 was invented. • 1972-C language was developed. • 1972-8008 Processor was released by Intel. • 1972-The first international connections to ARPANET are established. ARPANET became the basis for the internet. • 1974-Introduction of 8080. An 8 Bit Microprocessor from Intel. • 1975-Formation of Microsoft by Bill Gates and Paul Allen. • 1976-Apple Computer, Inc. founded, releasing the Apple II, first mass-market of PC. • 1979-Introduction of 8088 processor. • 1979-Compact disk was invented.	• Empiricist theory • Behaviorism • Audiolingualism • Structural Linguistics <u>Principles of Language Learning</u>: • Focus on stimulus, response, reinforcement. • Language learning is a process of habit-formation. • Focus on drill and practice. • Learn through imitation and repetition. • Give immediate feedback. • Individualized instruction was included to serve the pace of the learner.	<u>Behavioristic CALL</u> (eg. PLATO project: Aims at providing interactive, self-paced learning using mainframe computers.) <u>Main characteristics of behavioristic CALL</u>: • Based on behaviorist theory of learning. • Focus on receptive drills. • Mainly drill and practice type software. • Computer as tutor. • Learning activities promote language accuracy rather than fluency. • Designed to be implemented on mainframe and mini computers. Criticism of Behavioristic CALL: The Behaviorism and Audiolingualism were rejected theoretically and pedagogically by theorists and practitioners.

Communicative CALL

Personal Computers (PC) (1980s)		
Technological Development by Year	**Approaches to Language Teaching**	**Approaches to CALL & Examples**
• 1980-Development of MS-DOS/PC-DOS began by Microsoft • 1981-The first WIMP (Windows, Icons, Menus and Pointing Devices) by The Xerox Palo Alto Research Lab. • 1982-The TCP/IP Protocol established, and the "Internet" is formed. • 1982-80286 processor was released. • Compaq released their IBM PC compatible. • 1983-MS-DOS 2.0 was released. • Hewlett-Packard released LaserJet printer. • AT was released. • Apple Macintosh was released. • 1984- MS-DOS 3.0 was released. • 80386 DX was released. • 1985- Microsoft Windows was launched. • 1985- EGA was released. • 1985 - 80386 DX was released • VGA was released. • 1988 - MS-DOS 4. The development of word processing such as: • WordMaster • WordStar • WordPerfect	Cognitive Psychology Communicative Language Teaching Transformational Grammar Principles of Language Learning: • Learning is process of discovery, expression, and development. • Focus on functions of the language. • Emphasise on language use rather than usage. • Contextualization is important. • Communicative competence is the desired goal. • Focus on using language forms rather than forms themselves. • Teach grammar implicitly. Encourage students to produce language rather than manipulate the language, (Brown, 1994).	Communicative CALL: (e.g. Storyboard, Text reconstruction, Cloze exercises) • Serious educational applications appeared. • A boom of CALL due to the introduction of Personal Computer Main Characteristics: • View that drill and practice exercises did not yield enough genuine communication. • Computer-based activities • Focus on using the language in context. • Non-Drill Practice format Type • Text reconstruction • Paced reading • Cloze exercises Criticism of Communicative CALL: Computers were not fully well integrated into the curriculum. The greater contribution is on marginal rather than the central educational elements.

Integrative CALL: multimedia CD-ROM

Multimedia CD-ROM (1980s-1990s)		
Technological Development by Year	**Approaches to Language Teaching**	**Approaches to CALL & Examples**
• 1982 Audio CDs was introduced. • 1982 Book on Audio CDs was introduced by Sony and Phillips--beginning of the Compact Disk. • 1982 MIDI, Musical Instrument Digital Interface was introduced. • CD-ROM, invented by Phillips, produced by Sony. • 1989 CD-I released by Phillips and Sony. • 1989 Release of Sound Blaster Card, by Creative Labs • 1990 Introduction of Windows 3.0 by Bill Gates & Microsoft. • 1990 - MPC (Multimedia PC) was introduced. • 1991 - 80486 DX was released. A sound card and triple speed CD-ROM were added. • 1992 Introduction of CD-I launched by Phillips. • 1993 Pentium was released. • 1993 a CD-ROM drive capable of 300KB/sec (double speed) was introduced.	Humanistic Approach • Focus on Communicative Language Teaching: • Focus on meaning. • Use of authentic, meaningful and contextualized materials. • Fluency in language is a primary goal. • Focus on interactive language learning. • Consider learners' factors such as age, interest, learning styles, motivation. • Tasks relevant to students' real life interests and experiences (Felix, 1998). • Shift away from language usage to language use (Felix, 1998) • The teacher became a facilitator rather than the person who gives out information.	Integrative CALL:Multimedia CD-ROM (eg.Toolbook, Authorware, Planet English, Real English, Wiser Educator) Main Characteristics Use advantages of multimedia CD-ROM in teaching language for communicative purposes • Allow computer to incorporate a variety of media (text, graphics, sound, animation, and video) by Hypermedia • Emerge of friendly-user, powerful authoring software such as ToolBook, Authorware, and Director • Based on communicative language teaching approach • Built on student's intrinsic motivation • Foster the interactivity between the learner and the learner, and learner and computer • Multimedia resources are linked together • Learners can navigate their own path and set their own pace by pointing and clicking mouse • More authentic language learning environment is created • The four language skills are integrated • Focus on content and language skills • Allow learners to link to a variety of sources such as grammatical explanations, glossaries, pronunciation, exercises, etc.

Integrative CALL: internet applications

Computer-Mediated Communication (1990s-present)		
Technological Development by Year	**Approaches to Language Teaching**	**Approaches to CALL & Examples**
• 1969-Computer-mediated communication (CMC) but serious applications appeared in early 1990s. • 1960s-Hypertext was invented by Ted Nelson. • 1989- World Wide Web--the integration of hypertext and the Internet- was invented by Tim Berners-Lee. • 1990- Internet applications became popular such as E-mail, FTP, Talk (UNIX system) • 1992- Gopher was released. • The release of CERN (WWW), a hypertext based system for finding and accessing internet resources. • 1993- Mosaic (Web browser) was released.) • 1994- Netscape 1.0 was released. • 1995- Windows '95 was launched with Internet Explorer by Bill Gates & Microsoft. • 1995 - JavaScript was introduced by Netscape. • 1998 – Windows'98 was released. • 1995-1999 - Development of: • QuickTime • Real Audio • Real Movie • Shockwave • Web-based E-mail • Web-based Chat • Voice Chat • Internet Phone • Emerge of web authoring software such as Hot Potatoes, Authorware, and Director. • Desktop Conferencing	Communicative Language Teaching Focus on using the internet applications for communicative language teaching: • Foreign language learning will be an acquisition of language content through purposeful and reflective participation. • The curriculum is dynamic. • The role of the teacher is a facilitator, an inseminator of ideas, who draws student's motivation. • The learner is responsible, reflective and creative. • Textbook is a resource along with electronic resources. • Classroom becomes a reconfigurable space with electronic facilities. (Debski (1997:47-48)	Integrative CALL: Internet Applications (eg. E-mail communication, FTP, World Wide Web, Chat, Gopher sites, MOO servers, CU-SeeMe, Desktop Video Conferencing) • Aim at integrating computer-mediated communication applications for communicative language teaching as follows: E-mail • Allow learners to have direct communication around the globe. FTP • Allow learners and teachers to download documents, graphics, sounds, videos, and animation. WWW • Learners search and share different kinds of files on the internet (documents, graphics, sounds, video, animation). Chat: • Allow learners to have real time communication. Main Characteristics: • Allow computer to incorporate a variety of media from the internet such as text, graphics, sound, animation, and video. • Internet resources are linked together by Hypermedia. • Based on communicative. Language teaching approach. • Built on student's intrinsic motivation for authentic communication. • Encourage interactivity between the learner and internet users around the world. • More authentic language learning environments are created. • The four language skills are integrated (listening, speaking, reading, and writing). • Focus on a variety of content and multi-cultures.

USES OF CALL IN ENGLISH LANGUAGE TEACHING

This section gives a brief overview of how CALL has been used or can be used for the purpose of language learning and teaching. The use of CALL can be divided as follows: (1) Drill and practice, (2) Computer as tutor (3) Computer used for simulation / problem solving, (4) Games on computers, (5) Computer as a tool for ELT teachers and learners, and (6) Internet applications.

Drill and practice

In this use of CALL, computers are viewed as a tool for saving time with the immediate feedback. The learning principles behind Drill and Practice is the Behaviorism Learning Theory and the Audiolingual approach language to teaching. The main aim of Drill and Practice is to review the content / background knowledge, and to assist the learners to master separate language skills (such as reading, listening, etc.)

Drill and practice consists of three steps: Providing stimulus; Receiving active response from the learner; and Giving immediate feedback.

There are several types of drill and practice activities (exercises) such as Paired Associate (Matching); Sentence Completion; Multiple Choice; Part Identification; True-False; and Short-Answer questions.

Well-designed Drill and Practice programs can record the learner's progress and scores and the time a student spends on each exercise. Some programs add timing features to help the learner to control their speed while practicing. Drill and practice CALL programs in the early years focused on practicing language skills and components separately (such as vocabulary, grammar (such as irregular verbs, past tense, articles), reading, and translation. A lot of drill and practice exercises were produced by classroom teachers. There are several limitations of Drill and Practice exercises such as the lack of interaction and content materials which are not authentic, meaningful, and contextualized (Felix, 1998). As a result, the receptive language drill and practice programs of the 1960s –1970s did not produce enough authentic communication for the learners.

Another type of Drill and Practice is so called "contextualized activities" such as gap filling, reconstructing texts, etc. Examples of these programs are those developed in early 1980s such as *Cloze exercises*, *Text reconstruction*, and *Eclipse* (by Higgins), etc. A key authoring program used to generate text reconstruction is *Storyboard*, written by John Higgins (Levy, 1997).

Computer as tutor

The role of the computer as tutor is to present to the learners the content of the lesson as text graphics, video, animation, or slides, including learning activities, drills and practice. The computer serves as a means for delivering instructional materials.

The program consists of the following stages: Introduction stage (stating aims, background knowledge), Presentation of the content, exercises and/or testing; and Giving the feedback.

Examples of CALL tutorial programs are:

- **Grammar**: Longman Grammar Software; Grammar Expert Plus; Tense Buster (Clarity Software); Grammar Mastery (ALA); Grammar Rom (Addison Wesley Longman); Grammar 3D: Contextualized Practice for Learners of English (Heinle & Heinle).
- **Reading**: *Read It! Study Skills* (Clarity Language Consultants) (EAP reading); RocketReader (1998) (a speed reading program); ReadFlex (Speed Reading); Reading for English (Athelstan) (Reading Comprehension); SEEN: Tutorials for Critical Reading (KenCD Software) (tutorials designed to develop analytical thinking and critical reading skills); *Accelerated Reader* (Advantage Learning Systems).
- **Writing**: Paragraph Punch (a writing tutor for effective paragraph); WriteExpress Easy Letters (effective business letters); Power Editing (an interactive tutorial on how to edit and revise sentences); Report Writer for Science and Engineering Reports (Clarity Language Consultants) (EFL/ESL report science and engineer writing).
- **Speaking, Pronunciation & Listening**: *Learn to Speak* (The Learning Company); *English Pronunciation* (1997-98) (Okanagan University College); *Dragon, Naturally Speaking* (A voice recognition program); *See It, Hear It, Say It!* (Courseware Publishing International); *Accent Improvement* (SpeakWare); *Real English* (Wiser Software).
- **Integrated Skills / Courseware**: *Ellis* (CALI), *Dynamic English* (DynEd); *English Discoveries* (Berlitz); *English Language Development* (Jostens); *Rosetta Stone* (Fairfield Language Technologies); *Planet English* (Unisearch Ltd and the University of New South Wales); *Issues in English* (Protea Software); *Active English* (Courseware Publishing International).

Computer used for simulation / problem solving

Simulations and problem solving is used to foster analysis, critical thinking, discussion and writing activities. The computer is not used much for tutorial purposes. The program is designed to create language interaction through problematic situations, conditions or problems challenging for the learner to solve. Many simulation programs are problem solving games, which are entertaining and educational ("edutainment").

Oregon Trail (1995-1998) (CD-ROM)<http://www.cd-romlink.com> is one of the earliest educational simulation problem solving games. The learners are challenged to make a series of decisions to guide their party from Missouri to Oregon by covered wagon. These decisions begin with choosing a departure date, through the daily decisions relating to pace, restocking and direction. The learners face a series of obstacles: fires, floods, injuries, no water, bad water, no grass, food spoilage, etc. The learners have to make life-or-death decisions. Though Oregon Trail is not directly designed for ELT classes, the teacher can create learning activities in both receptive and productive skills.

Other educational simulation problem solving games are *Carmen Sandiego, A Day in the Life* (1995), and *Carmen Sandiego Word Detective* (1999), which

helps learners to master essential language skills, *Amazon Trail II* (The Learning Company) which is a simulation of a trip up the Amazon River.

Games on computer

The main principle behind computer gaming is that "Learning is Fun." The main aim is to create a pleasurable learning environment , and to motivate the language learner. However, good educational games should have clear educational objectives.

CALL games and simulation games are similar in that both are designed to motivate students to learn through entertainment. However, they are different in certain ways. Simulation games always use simulations (real life situations) in the presentation of a game, while CALL games focus on providing fun, but challenging environment to the learner. Though CALL games have clear learning objectives, they are different from Tutorials and Drill and Practice. The main function of CALL games is not so much to present the language content as tutorials do but to provide entertainment to the learner.

Examples of CALL vocabulary games are *Spelling Games*, *Spelling Bee and Magic Hat*, *Scrambled Word*, *Word Worm*, *Hangman*, *Word Order*, *Find a Word*, *Word Puzzles*, *Spelling Buddy*, *Cross Words*, *I Love Spelling* (DK multimedia), *Scrabble Deluxe* (Virgin Games) (Computerized version of the board game), etc.

Computer as a tool for teachers and learners

Word Processors

The most common tool used by teachers and learners in CALL is probably word processors. Word Processors are tools for creating documents for making handouts, sheets, desktop publishing, letters, and flyers for language teaching and learning. There is a variety of word processors available, ranging from high quality programs such as *Microsoft Word* <http://www.microsoft.com>, *Corel Word Perfect <http://www.corel.com >* to simpler and cheaper programs such as *Microsoft Works <http:www.microsoft.com>*, and *Claris Works <http://www.apple.com/appleworks>*. Teachers can choose ones suitable for their students.

Spelling checkers

Spelling checkers are tools for ELT teachers and learners for conducting spelling check. Most high quality word processing programs such as *Microsoft Word*, *Word Perfect* have built in spelling checkers. However, there are separate spelling checking programs available such as *Spell it Deluxe (1997)* <http://www.davd.com>, or *Sentry Spelling-Checker Engine*.

Grammar checkers

ELT teachers can use grammar checker programs to check and point out grammatical problems in writing. Like spelling checkers, grammar checkers can be a separate program such as *Grammatik* or built-in programs such as the *Grammar Check* in Microsoft Word. However, these grammar checkers still have limited abilities and are intended for native speakers. So they are not recommended for ESL/EFL learners since they may be confusing.

Concordancers

Concordancing is an alphabetical list of words. It displays, in context, all occurrences of words, phrases, etc. from a database of text. Teachers and learners can use concordancing software to search large databases to find all the uses of a particular word. It might be confusing for ESL/EFL beginners. The best concordancer for ELT teachers and students is *Oxford MicroConcord* . The software includes a total of about 1,000,000 words from British newspapers.

Collaborative writing

Collaborative writing is software that helps the learner to write collaboratively on computers, which are linked in a local area network*. Daedalus Integrated Writing Environment* is the most popular one. This software includes real-time discussion, word processing, electronic mail, brainstorming, and a dictionary.

Reference software

At present many CD versions of encyclopedias, dictionaries, thesauruses, maps and other references are available to the teachers and learners. Popular reference CD-ROM programs *are Microsoft Encarta 99* < http://www.iac-on-encarta.com/>, *Longman Dictionary of American English*, *Oxford Picture Dictionary CD-ROM* (1997) <http://www.oup-usa.org>and *BookShelf* <http://www.Microsoft.com>*. Microsoft Encarta Interactive World Atlas 2000* <Http//www.microsoft.com> *Roget 's thesaurus.com* <http://www.thesaurus.com/>, *WordWeb*, (a thesaurus /dictionary), *Collins On-Line Dictionaries*, *American Heritage Dictionary* (Softkey*); Longman Multimedia Dictionary*, *Grammar Reference* (US English grammar usage), *American Heritage Talking Dictionary* (The Learning Company). Please note that entries in many of these programs may be biased towards the country of origin.

Authoring

Generally, ELT teachers use commercially available CALL software. However, much software does not meet the demand of the learners or does not suit the learning objectives. Teachers need to adapt or create their own materials from scratch. In this case, the teacher has to become an author, or a teacher-programmer (Levy, 1997). The authoring software allows teachers to select appropriate content and learning activities according to their students' needs. There is a variety of authoring software ranging from pre-scripted authoring programs such as *Authorware* (Macromedia), *Toolbook* (Asymetrix), etc. which requires the user to write scripts, to customized template authoring programs and allow the teacher to create customized teaching activities and exercises such as *Storyboard*, *Clozemaker, ChoiceMaster, GapMaster* in *Wida's Authoring Suite*, *Wiser Educator*, *Author Plus* (Clarity Language Consultants), *Authorware Attain* (Macromedia).

Internet applications

Computers can be connected to the internet and can incorporate interactive multimedia: text, graphics, audio, video, and animation. It can be said that the explosive growth of the internet has given new life to interactive media and CALL.

To access text, graphics, audio, video, and animation published on the internet, the teacher and learner need to use "Web browser" software, a computer based

graphical program that allows users to search and explore information on the internet. Common Web browsers are *Netscape Navigator* and *Microsoft internet Explorer*. It is expected that the internet will become one of the most popular mediums for CALL because it allows for world-wide distance education.

The use of the internet is easy. The user usually interacts just by clicking the mouse. Easy navigation is an advantage of using the internet in linking to different sites around the world.

The following are internet applications that ELT teachers can use for language teaching:

Electronic mail (e-mail)

Computer-mediated communication makes it easy for ELT learners to have direct authentic communication with the teacher, other learners or interested people around the world by using e-mail. E-mail is an excellent method for teaching interactive writing. One of its advantages is that it provides interaction with native speakers through pen-pal correspondence. E-mail writing is considered to be more personal and meaningful than classroom writing activities. (Felix, 1998). A problem concerning interaction through E-mail is that the communication does not take place at the same time (asynchronous).

There is a variety of e-mail programs that can recommended for the learner. The most popular program on the Unix platform is *Pine* of Washington University <http://gpu.srv.ualberta.ca/HELP/mail/pine1.html>. *Eudora* <http://www.eudora.com> and *Netscape Mail* <http://www.netscape.com> are easy to use. However *Pine* and *Eudora* require direct connection to the internet through the server in which the user is a member. If the user wants to access to e-mail anywhere and anyplace in the world, he/she can apply for free web-based e-mail services such as *Hotmail.com* <http://www.hotmail.com>, *Yahoo.com*<http://www.yahoo.com>, *Mail.com* <http://www.mail.com>, *AltaVista.com* <http://www.AltaVista.com>, etc.

File Transfer Protocol (FTP)

The File Transfer Protocol (FTP) is a facility for transferring files over the internet. The original FTP was available on the UNIX system. But now FTP is also available on the web, and it is becoming more user-friendly than the one operating on the UNIX system.

When the user connects to a remote computer with FTP, he/she is communicating between the two machines: one local and one remote. Once you connect to the remote computer with FTP, you can do several jobs concerning files such as sending local files (text and binary images, and sound) to the remote site, retrieving files from the remote site, changing directories, naming and deleting files both on the local and remote sites.

ELT teachers can use FTP to download or upload files such as software programs, texts, images, sounds, videos. A lot of FTP sites are available on the internet at several servers such as the FTP server at University of Illinois at Urbana-Champaign < ftp://ftp.ncsa.uiuc.edu/ >Washington University at St. Louis < ftp://wuarchive.wustl.edu/ >, FTP server at Monash University <ftp://ftp.monash.edu.au>.

World Wide Web (WWW)

Computer networks have allowed to connect to information around the world, and share millions of documents—texts, graphics, sounds, and video via hypertext keywords or links. WWW or the web now has absorbed many of the above services. For example, the web can now do e-mail, ftp, chat and voice chat, desktop conferencing, and MOOs (Multiple-user-domains Object Oriented), which allows for real time communication.

The WWW provides a rich resource of "authentic materials" for language teaching and learning. Using web browsers such as *Netscape* <http://www.netscape.com> and *Internet Explorer* <http://www.microsoft.com/>, the WWW yields good (and bad!) resources for the teacher and the learner. Learners can find information which suits their own interests and fields of study.

The teacher and learner can search for the following materials on the WWW:

a) Texts

Texts can be downloaded, saved as .html or .text files, and printed and kept as worksheets. Teacher can download suitable texts and put them on the school's website for further reading assignments or doing English exercises such as grammar, vocabulary, etc. There is a wealth of texts on a variety of topics on the WWW that the teacher and the learner can choose to serve their own interest. You can find texts in almost any field on the WWW. However, there are some limitations on using text files on the WWW. Many web sites consist of poor written texts with grammar and spelling mistakes or poor writing style. The teacher must be selective in choosing text files for ELT learners. A good website is *CNN News Room* <http://lc.byuh.edu/cnn_n/cnn-n_page.html>. The student will learn both news and do some language exercises such as vocabulary, grammar, reading, etc.

b) Pictures

Pictures can be very useful in language teaching and learning. Pictures can convey meaning and stimulate language. By using a web browser, teachers can download, save and print pictures and keep them as a resource for language teaching. There is a variety of pictures on the web. Many pictures are copyright-free for educational use. *AltaVista* <http:www.altavista.com>is a good search engine for searching pictures on the internet.

c) Audio files

A lot of web sites provide audio clips that the user can download and store for use in language teaching and learning. With advanced technologies such as the *RealAudio* program <http://www.real.com>, the teacher can download "live" audio files such as news, short stories, songs for use in class and self access center or for individual listening at home. Web sites that provide audio files are such as *CNN News*<http://www.cnn.com>, *BBC English* <http://www.bbc.co.uk/worldservice>, etc.

d) Video files

The WWW is also a rich resource for Video files (video films, video clips, digital movies). To view video files, there is a need for video and movie viewing programs such as *RealVideo*<http://www.real.com>, *QuickTime*

Movie<http://www.apple.com/quicktime/>, which can be downloaded from the internet. Useful videos and movies that can be downloaded and saved are: previews of video films, movies, conversations or dialogues among people, news, speeches, and documentary films. Teachers can use videos and movies with other media, such as textbooks, pictures, handouts, or audio materials. However, there are some technical limitations with downloading video materials. Video clips, which are usually short, are easy to download and manipulate. However, long videos and movies, which need a lot of computer RAM and disk spaces, always cause problems. The computer must be powerful and must have a fast internet connection.

e) Chat & voice chat

Computer-mediated communication allows users to exchange real time instant messages (no time delay as in e-mail). The applications of this capacity are chat programs that allow users to connect to remote sites to send and receive instant written messages. “Talk” is an original version of chat on the UNIX system. Web-based chat is easier to use than the UNIX system “talk”. Examples of chat programs on the web are: *ICQ* < http://wwp.icq.com/>, *IRC* (Internet Relay Chat) < http://www.ircnet.org/>, *Yahoo* <http://www.yahoo.com>. With the progress in real time audio technologies, voice chat is becoming available (e.g. Yahoo Voice Chat <http://chat.yahoo.com>). Voice chat allows users to exchange real time-instant digital voice messages with users in remote sites.

Chat provides a strong motivation for interactive and communicative use of language. ELT teachers can use chat sessions as a means for meaningful authentic communication with the real audience. The learner can join several chat groups according to his/her own interest.

f) Desk-top teleconferencing

One of the most important aspects of MOOs (Multiple-user-domains Object Oriented or Multi-User Object Oriented systems) is communication (verbal, nonverbal, expressing feelings) with people connected to the MOO from all around the world. MOOs evolved from MUDs (Multi-User Domains). MOOs allows for real time communication, simulation, and role play among users. The users can build their own new "rooms” and write the description, to determine who could come in and out. The user can even create their own virtual home.

Recently a lot of special MOOs have been set up for ESL learners to participate such as CU-SEEMe <http://www.cuseeme.com>. In using MOOs special client software programs such as TinyFugue (for Unix, MUDDweller (for Mac), or MUDwin (for Windows) are needed.

MOOs provide a strongly motivated means for meaningful authentic communication with a real audience. Those who are interested in this desk-top teleconferencing can join MOOs on many websites such as the *CU-SeeMe website* <http://www.cu.seeme.com>, and at *Rachel's Super MOO List* <http://cinemaspace.berkeley.edu/~rachel/moolist/>.

ADVANTAGES AND LIMITATIONS OF CALL

While Section 3 above shows some of the benefits of how CALL can be used for language teaching and learning, CALL also has some limitations. This section reviews advantages and limitations of CALL.

Advantages of CALL

Learner factors

- CALL can adapt to the learners' abilities and preferences.
- CALL can adapt to the learners' cognitive and learning styles.
- CALL can adapt to the learner's self-paced learning. CALL can be used for remedial work for slow learners and to accelerate learning for fast learners.
- CALL offers individualized and private learning.
- CALL, with branching capability, provides choices and paths for learning, allowing learners to work independently.
- CALL allows learners to control their own learning process and progress.

Motivation and attitudes

- CALL provides strong motivation for learning. Students will often do on a computer what they are reluctant to do in a textbook or paper-pencil.
- Some CALL features such as graphics, sounds, animation, video, audio are interesting and motivating for many learners.
- CALL can improve learners' attitudes towards learning English.
- CALL (internet) provides authentic communication that motivates students to use language outside language classroom.

Feedback and progress record

- CALL can provide immediate responsiveness and feedback.
- CALL provides accurate records of the learner's performance and progress.

Teacher's role and relationship with the learner

- CALL can change the relationship between teacher and student.
- The teacher becomes a facilitator rather than a person who controls the learning environment.
- CALL is predictable and non-judgemental.

Mastery learning

- CALL provides opportunities for mastery-learning language skills.
- CALL can lower the amount of time required to master some materials.

Co-operative learning

- CALL (e.g.simulation games) encourages learners to work cooperatively in problem solving.
- CALL allows learners to learn cooperatively as a result of working together (such as group works, and discussion.)

Communication

- CALL (e.g. games and puzzles) creates information gaps which provide learners a need to communicate or interact with each other or with the program.
- CALL (e.g. e-mail, chat, moos) promotes direct communicative skills for the learners.
- CALL (e.g. e-mail, chat, moos) provides authentic, real communication with native speakers of English outside the classroom.

Access to information and cultures

- CALL (e.g. CD-ROM and the internet) can increase access to information to the learners.
- CALL (CD-ROM and the internet) allows learners to access cultures around the world.

Learning environment

- CALL is a neutral medium. Compared to teachers, computers do not lose patience, get angry, or play favourites as some teachers do. This creates a safe learning environment.
- CALL can provide an active and positive learning environment.
- Integration of a variety of multimedia such as texts, graphics, sound, animation, and video, allowing for creating authentic meaningful language learning environments.
- CALL (the internet) has no limitations regarding different time zones and places.

Cost effectiveness

- CALL is cost effective.

Limitations of CALL

Cost:

- Schools may lack funds for CALL implementations. Hardware and software may be expensive for schools that have limited funding.
- The design of good CALL software requires expensive equipment and cooperative teamwork.
- Not all students can access CALL (e.g. the internet). In many developing countries, there is a discrepancy between the "have's" and "have not's" regarding internet access.

Teacher's attitudes and anxiety

- ELT teachers may have negative attitudes towards CALL.
- There is fear that CALL might replace teachers.
- Many ELT teachers are anxious about CALL because they have limited skills and experience in CALL theory and delivery.
- There is fear that the computer might isolate students from social activities.

Training

- A lot of ELT teachers still lack training and skills in using the CALL, and training costs are high.
- Training learners to use computers takes students' time away from other educational activities.
- ELT teachers may lack the necessary computer-related skills.

Hardware, compatibility, and technical support

- Computer hardware is difficult to install and maintain for classroom teachers.
- Spontaneous language production (e.g. speaking) is still limited by the hardware capabilities such as voice-recognition and voice recording.
- Graphics and sounds provided on the computer are sometimes unrealistic and incomprehensible.
- CALL software is sometimes restricted by the capabilities of the hardware (e.g. not enough RAM to run big CD-ROM programs).
- Disk space is still problematic for storing large multimedia files.
- CALL (e.g. CD-ROMs) are sometimes not suitable for all computers, platforms and hardware.
- Web pages appear differently on different computer platforms (e.g. Windows, Mac). It sometimes makes students confused.

Software

- There are many poor CALL software programs due to the lack of programmers with linguistic knowledge, and language teaching experience.
- A lot of CALL software (e.g. Drill and Practice type) focus on teaching separate, discrete language skills and component, ignoring discourse, contexts, and cultures.
- Some CALL (e.g. the internet) does not support face to face communication (e.g. E-mail, chat) well, though some present technologies can provide sounds and pictures during communication there are some limitations with speed, sound and picture quality.
- A lot of CALL activities (e.g. behavouristic approaches to CALL) are limited to certain types of exercises such as multiple choices, true false, matching, ignoring question-answer interactions.

- There are a lot of web pages of poor quality. There is a lot of junk on the internet. Teachers need to evaluate internet web pages with great care before downloading or assigning the students to access them.
- At present CALL software still lacks ability of abstract reasoning and problem-solving processes.

Accessing CALL on the internet

CALL on the internet is not yet fast enough in many places.

- Accessing audio, video and graphics files may be slow and unreliable on modem connections
- Searching CALL on the internet is time-consuming and distracting since it is non-linear.
- Searching on the internet is compromised by a lack of effective search engines on the web. Many users end up with no information at all after many hours of searching.

Feedback and evaluation

- Feedback is still limited. It has to rely heavily on the teacher's input.
- Feedback on internet-quizzes is sometimes slow.
- Evaluation and exams on the internet is still difficult. It may cause some inconvenience and students might cheat since it is not closely supervised (compared to conventional paper and pencil tests).

TIPS IN USING CALL

The following, are tips for effective use of CALL for ELT teachers:

- Use CALL to serve educational purposes. Teachers should not jump on the bandwagon just because other people have done so. Many teachers use CALL because it is a new technology (like the language lab used to be about 30 years ago) without considering whether it serve or gives true value to educational objectives.
- Do not isolate CALL from the rest of the curriculum. Try to integrate CALL with other subjects or disciplines in the curriculum. Using CALL across the curriculum will make it more integrative.
- Consider CALL as one of many learning resources. Teachers should try to incorporate other learning resources and materials such as books, magazines, video, audio tape, with their teaching.
- Choosing appropriate CALL software for the learner, such as age, need, and interest is important. Software evaluation guides are important tools for the teachers in choosing suitable software.
- Using CALL is not the end in itself. Follow-up activities are also important. A lot of lessons end when CALL finishes in class. In fact, follow up activities such as group discussion, writing assignments, searching for more data from other learning sources e.g. interviews, and surveys are also important.

- Do not expect that all students in class would enjoy working on the computer. A lot of students prefer human interaction (such as student – teacher or student – student) than with the computer. Teachers should provide alternative activities for those students who prefer traditional learning approaches.
- Do not expect that all students can work easily with the computer. Many students take much longer to learn certain skills such as using the keyboard, the mouse, etc., while other students pick up these skills easily. Teachers must be patient and willing to help the slow groups.
- Try to incorporate a variety of activities on CALL such as desktop publishing (e.g. word processing), e-mail correspondence, web publishing (e.g. home pages, newspapers), chats and moos, and web based assessment.
- Do not expect that teaching with computers would be easy for all teachers. It can be exhausting or may require a lot of preparation such as setting up the computer lab, preparing suitable software and materials (printed and online), including follow up activities. Team work seems to be the best solution for implementing CALL in school.

CONCLUSION

CALL has important potential for English language teaching. If used properly with clear educational objectives, CALL can interest and motivate learners of English. CALL can increase information access to the learner, provide flexibility to instruction and thereby better serve the individual's learning pace, cognitive style and learning strategies. CALL allows learners to control their own learning process and progress. Using effective and suitable software applications, CALL can provide communicative meaningful language learning environments. Good quality and well-designed CALL software can offer a balance of controlled practice and free communicative expression to the learners, including immediate feedback. In the future, with the advance of computer technologies, it is expected that CALL will be able to absorb some teaching functions. However, despite greater user-friendliness, and effectiveness, CALL will never replace the teacher. Like other new technologies, CALL is not a magic solution to language teaching. The effectiveness of CALL relies on how CALL is utilized to meet language learning goals for individualized learners in specific educational settings.

2 CALL management in the self access centre: user policy development

Wichai Kritprayoch

INTRODUCTION

General background

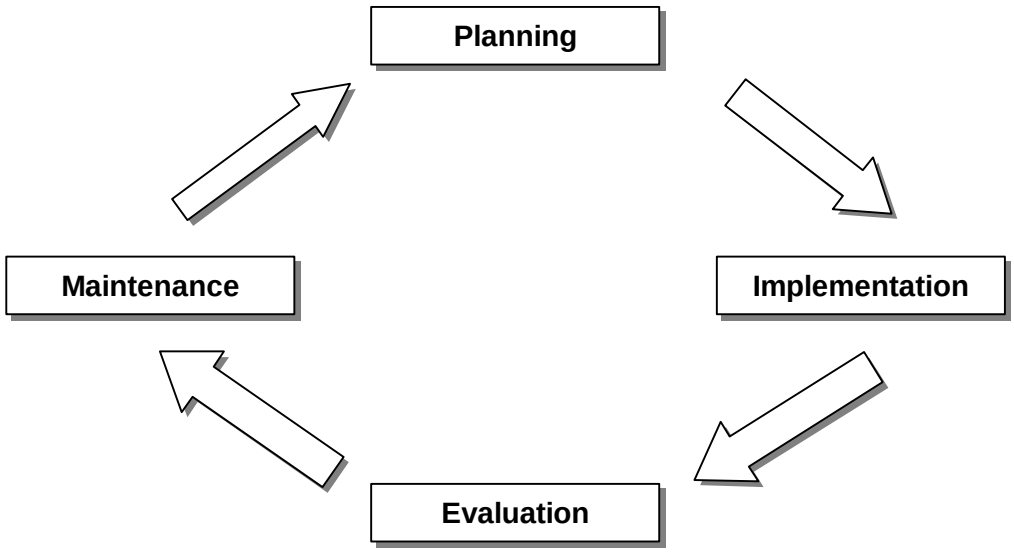
In recent years, Self Access Centres (SACs) have been established in a large number of schools, institutes, and universities in Thailand. This is partly due to promotion at the national policy level; and partly because of a trend in language learning in Thailand in which the focus has moved from teacher dependence to learner autonomy. Most SACs include computer assisted language learning (CALL) as a key part of self access learning. Through this mode of autonomous learning, students can choose materials which suit them best and use them to learn in their own way, in their own time, and at their own pace. In other words, the SACs are the place where learners can develop their initiative, responsibility, self-awareness, confidence and independence in learning. They can experiment with flexibility in their learning style and decide what, when, why and how to learn.

The process of CALL management in self access centres

Although CALL is frequently one of the most important parts of a SAC as mentioned above, it is not easy to run and support without having good management strategies with clear outlines for student use.

CALL management is a state-of-the-art process which requires strategic skills. According to Diagram 1 (overleaf), it can be seen that there are four steps in the process of CALL management in a SAC. Firstly, the planning stage is very important for addressing issues of who, what, when, where, why and how. In the planning process, analyzing, planning and designing are paramount. For example, if you want to have a SAC which includes a CALL section, the first thing you have to do is to ascertain the needs and purposes of administrators, teachers and learners are. Decision making is often better if the administrators, teachers and learners are all involved in the process of setting up the CALL section.

Diagram 1: The Process of the Management of Computer Assisted Language Learning in a Self Access Centre



In the planning and designing stage, the following items should be taken into consideration:

- *Staffing:* students, and teaching and technical staff who get involved in the CALL section
- *Resources:* media and information which is relevant to students and teachers
- *Software:* selection of the educational and computer system applications
- *Hardware:* equipment for the CALL section
- *Budget:* payment for the CALL section
- *Management:* strategies to keep the CALL section operating smoothly
- *Location and Layout:* effective arrangement of furniture and facilities in the CALL section
- *Others:* tables, chairs, shelves, boards, stationery, etc.

Secondly, after you have analyzed, planned and designed what you are going to do, putting all the ideas into practice is referred to as the *implementation stage*. The following are some guidelines for implementation:

- Involve the institution, the faculty and the department
- Consider your institution's situation e.g. organization, location, population
- Choose software first and then hardware
- Remember that staffing is as important as equipment
- Decide how the CALL section will be used by teachers and students before arranging the furniture
- Start small then grow
- Provide adequate training for teachers and students
- Provide technical support, maintenance and security
- Draft regulations of use

Thirdly, you will have to evaluate the use of the CALL section, and decide whether or not it is effective. This is to find out what aspects should be improved and adjusted for efficiency and for ease of use.

Finally, after you have evaluated the CALL section and it has been operating for a period of time, it is a good opportunity to think about how to maintain it so that the CALL section can be used more effectively and efficiently.

Changing role of the SAC

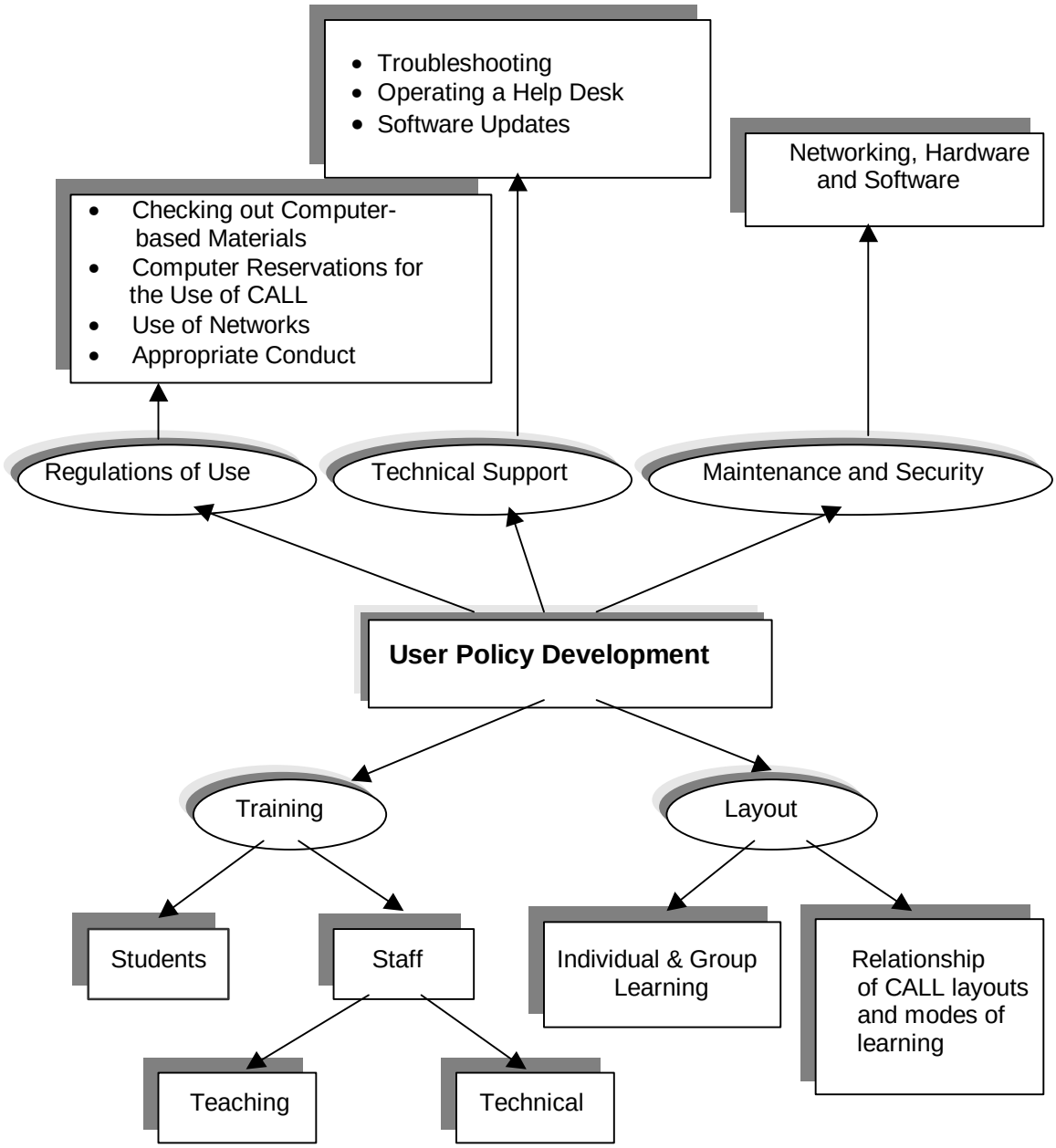
CALL in Thailand is now playing an increasingly important role in language learning. Most SACs aim at setting up a CALL section or computer laboratory to serve the needs of learners and teachers. In the future, computer labs may takeover the role of the SAC. This is because more and more resources are available electronically. Computer labs will therefore become multipurpose facilities for various purposes, including CALL. In this case the people who get involved in setting up the computer laboratory will have to think more about the process of CALL management as mentioned in 1.2.

User policy development

One of the most important components of CALL management in the SAC is user policy development which will be discussed in this section. The main purpose of user policy development is generally to make the CALL section run smoothly and effectively. User policy development mentioned in this chapter, includes the following topics as can be seen in Diagram 2 (overleaf):

- Regulations of Use
- Technical Support
- Maintenance and Security
- Training
- Layout

Diagram 2: User Policy Development for the CALL Management in the SAC



REGULATIONS FOR THE USE OF CALL IN SAC

Regulations for the use of CALL in SAC are essential for CALL management. In order to draft the regulations, the SAC manager and the SAC administrative committee, should think of what will be included in the regulations for the effective use of CALL so that everybody can use the facilities without any difficulties. Also the regulations should aim to benefit most users for self access language learning purposes. Yet, if the CALL section is used for language teaching, CALL regulations should be enhanced to accommodate teaching requirements.

Generally, there are four main parts which should be taken into consideration when drafting the regulations:

- Checking out computer-based materials
- Computer reservations for the use of CALL
- Use of networks
- Appropriate conduct

Checking out computer-based materials

Computer-based materials are one of the most important parts of CALL. The crucial question is: "Should users be able to check out the computer-based materials i.e. CALL programs or CD-ROMs?". The answer depends on the user policy of the SAC. It is also dependent upon whether the SAC provides only stand-alone computers, or LAN / Intranet and Internet networking in the CALL section. If it provides only stand-alone computers in the CALL, there should be multiple copies of computer-based materials. On the other hand, if it is networked, there might not be any CD-ROMs provided in the CALL section because all the programs can be installed onto the server. Therefore, if the computer-based materials can be checked out, the following questions should be considered by the SAC manager:

- What kind of computer-based materials are available to be checked out?
- How many copies of the computer-based materials are provided in the SAC?
- Who can check out the CALL materials, students or language teachers?
- What are the purposes of using the computer-based materials, e.g. for classroom teaching or for self-access learning?
- Where can the users use the materials, inside the SAC, in the office or at home?
- If the users can check out the computer-based materials outside the SAC, how long can they use them?
- Should the CALL programs be installed onto the hard disk or can they be installed onto the local or central server?

Computer reservations for the use of CALL

In general, most computer laboratories hold a *first-come-first-served* rule. When the CALL section in the SAC becomes more popular, however, congestion problems will certainly occur. One solution is to provide more computers for users. If this is not possible, there are several ways to help solve this problem as follows:

- Classroom teaching in the CALL section should get priority over self access learning.
- A reservation record sheet should be provided for users (learners and teachers).
- A maximum period of use should be clearly stated when users make a reservation.

Use of networks

Computer networks are used for accessing, communicating and electronically transferring information for instruction and student learning. In a networked environment, the following regulations may help the CALL section run smoothly:

- Sending messages that contain viruses which may result in the loss of work or systems are forbidden.
- SAC networks should not be used for commercial purposes e.g. marketing or business transactions between commercial organizations.
- Advertising is not allowed.
- SAC networks should only be used for the provision of academic services which support the needs and purposes of learning and teaching languages.
- Any kind of communication which violates applicable laws and regulations is prohibited.

Appropriate conduct

In using the CALL section of the SAC, appropriate conduct should be taken into account because this can help everyone use the computing facilities more effectively. Following are examples of appropriate conduct:

- Use your account for your own work and keep your private password confidential.
- Before using the computing facility, use your own account and password to log into the programs; and when you finish, do not forget to log off the network so that unauthorized persons cannot use the facilities.
- Use only your own account to search information and support your own learning or research projects for academic purposes.
- Use only your own account to access the programs available in the CALL section.
- Respect the privacy of other users.
- Respect the legal protection provided by copyright and licenses to programs and data.
- Contact technical staff if you find problems with the hardware, software or networks.
- Never use another person's account and password.
- Never access, upload, download, transmit, display, distribute obscene or sexually explicit material, or transmit obscene, abusive, or sexually explicit language.
- Never damage or disable computers, computer systems or computer networks.
- Never violate copyright or use another person's intellectual property without his or her prior approval or proper citation.
- Never install software onto a computer or delete software.

In addition, there are some additional regulations for the effective use of CALL which the SAC managers should bear in mind. They are as follows:

- Food, drink or tobacco products are not permitted in the CALL section.
- Playing computer games and recreational activities of any type are not allowed in the CALL section.
- Without permission, printing on special paper is forbidden in the CALL section.
- There shall be no installation of software on these machines.

Below are some web sites that provide some examples of regulations being used at educational computing facilities:

- http://www.nsac.ns.ca/ac/policy1htm
- http://www.mccsc.edu/policy.html
- http://www.eiu.edu/~ssblab/index.shtml
- http://www.rowan.edu/its/policies/
- http://www.uaf.edu/DCC/main/lab_policy.html
- http://www.shs.springfield.k12.il.us/lab/policies/rules.html

TECHNICAL SUPPORT

In using the CALL section in a SAC, adequate technical support is essential. There are three main aspects of technical support: 1) troubleshooting; 2) operating a help desk; and 3) updating software.

Troubleshooting

Troubleshooting in the CALL section will suggest about how to solve problems that might occur frequently with programs. This can be done in the form of FAQ's (frequently asked questions), manuals, face-to-face contact, telephone, online and onsite services. This means that the CALL section needs to provide a technical expert in both daily operations and maintenance to assist in solving both expected and unexpected problems. Following are some examples of unexpected technical problems which require specific procedures:

- How to deal with the problem when the computer cannot be booted.
- How to get into the CALL program when the system has been altered by a previous user.
- How to exit or log off when the application crashes.
- What to do when the computer hangs or does not work.
- How to adjust the colours of the CALL program on the screen.
- What to do when the audio of a CALL program is not working.
- How to adjust the volume of a CALL program.
- What to do when you cannot print your work out.

Operating a help desk

A help desk is a necessary part of the CALL section. It should be nearby; otherwise, users should know where the help desk is when they have got any technical problems. Consequently, there should be at least one technical expert working on duty at the help desk in order to cope with any unexpected technical problems such as those as mentioned above.

Updating Software

One important task of the CALL section is to periodically update CALL software to bring it up-to-date with current versions. New software should be purchased regularly to make it more interesting for users and to serve users' needs because the world of CALL software is growing and changing rapidly. In addition, some utility software should also be purchased or updated. For example:

- Log-in software to check students into and out of the CALL section
- Security software which makes the CALL section function efficiently and protects the system from rogue users (see details the next section)

MAINTENANCE AND SECURITY

Maintenance and security are important aspects of running a CALL lab. Without maintenance and security, the CALL section will not run smoothly and effectively. There are several key features to look for in security software that makes the CALL section function efficiently:

- Security utilities should not change the 'look and feel' of the operating system.
- You should be able to administer the security utility on all machines from a single location i.e. via a LAN.
- Passwords on the security utility should be easily changeable so that when you have a new group of workers in the CALL section you can quickly assign a new password.
- The security utility should allow you to designate one folder of your local hard drive as a 'temporary' folder in which all users can create files, and from which they can copy them to diskette or other removable media, or to a public file server. (See details in http://tcom.ohiou.edu/OU_Language/teacher/labmanage.htm)

In addition, the emphasis on maintenance and security of the CALL section should include the following topics:

- Maintenance of a list of the systems and installations
- Updates to computer virus detection utilities (on a bimonthly basis)
- Computer security awareness and training for managers and staff who are responsible for management, administration, operation, maintenance, or support related to the systems and the installations

- Periodic computer security reviews of the systems and installations (See details in http://www.dol.gov/dol/oasam/public/programs/plan/security.htm)

Regarding internet access, there are a number of programs which are designed to filter unappropriate material when browsing:

- *Cyber Patrol*, an Internet filtering program, from The Learning Company provides customizable access controls for multiple users. (See details in http://www.superkids.com/aweb/pages/reviews/kidsafe/1/cp/merge.shtml)
- *SurfWatch* from SurfWatch Software, provides excellent protection against intentional or accidental exposure.(See details in http://www.superkids.com/aweb/pages/reviews/kidsafe/1/sw/merge.shtml)
- *Internet Explorer 3.0 or later* from Microsoft, has the ability to block websites that provide PICS ratings labels. (See details in http://www.superkids.com/aweb/pages/reviews/kidsafe/1/ie/merge.shtml)
- *KidDesk Internet Safe* from Edmark, provides absolute access control. Specific websites and applications must be pre-selected for each user. (See details in http://www.superkids.com/aweb/pages/reviews/kidsafe/1/kiddesk/merge.shtml)
- *Net Nanny* from Net Nanny Software, attempts to filter by comparing words and website addresses to “forbidden” lists. (See details in http://www.superkids.com/aweb/pages/reviews/kidsafe/1/netnanny/merge.shtml)
- *WebChaperone* from Rulespace, uses an effective, non-list-based approach to Web-only filtering.(See details in http://www.superkids.com/aweb/pages/reviews/kidsafe/1/wc/merge.shtml)

As for hardware maintenance and security, these are some guidelines that could be considered:

- Before using the facility, every user should sign in and out of the lab with the use of check-in software.
- All the equipment and peripherals (CPU, monitor, keyboard, mouse, printer, etc) should be bar-coded, secured by cable (if possible) and periodically checked to ensure they function well.
- A bar-code laser reader should be installed at the exit to prevent users from taking the equipment out of the section without permission.

TRAINING

Human resources are as important as equipment. Faculty staff and students need to be trained and supported in using electronic technologies as an aid to language teaching and learning. That is to say, they should have been psychologically and methodologically trained in order that they will have a positive attitude towards CALL and use it effectively. In psychological training, they should be trained to change their attitude towards CALL; whereas, in methodological training, they will be taught how to use computers to serve their own purposes (either self-access learning or classroom-based teaching). Staff

and students may require release from their regular duties to undertake training. There are some suggested activities that should be included in the training:

Training	Staff		Students
	Teaching	**Technical**	
Psychological	• Brainstorm and share experience on the roles of CALL in language learning and teaching • Point out the importance and advantages of CALL that enhance learning and teaching	• Brainstorm and share experience on the roles of CALL in language learning and teaching • Point out the importance and advantages of CALL that enhance learning in class	• Brainstorm and share experience on the roles of CALL in language learning and teaching • Point out the importance and advantages of CALL that enhance learning in class
Methodological	• Attend forums, seminars and workshops on CALL applications by in-house trainers and invited experts • Provide commercial videocassettes or CD-ROMs for training in the use of common software • Visit nearby institutions using key software • Be trained to develop work groups to produce computer-based materials for language learning • Attend demonstrations on how to use the new CALL software by CALL software experts	• Attend seminars and workshops on CALL applications by in-house trainers and invited experts • Provide commercial videocassettes or CD-ROMs for training in the use of common software • Visit nearby institutions using key software • Consult with teaching staff when preparing posters, manuals on CALL software • Be trained to help teachers produce computer-based materials for language learning	• Attend an orientation on CALL programs available in the first lesson of the course • Be equipped with computer skills by peers or teachers • Be trained on how to use CALL programs by teachers • Attend demonstrations of new CALL software • Be equipped with handouts, posters and manuals of CALL software which have been prepared by teachers

In addition, a great deal of informal training is conducted by peer and group skill sharing in many SACs. This means when students are assigned to do CALL work in pairs or even in groups, advanced students can help inexperienced students by sharing CALL experience with each other. However, this should be encouraged by rewarding and acknowledging this behaviour.

LAYOUT OF THE CALL SECTION

The layout of the CALL section depends on available space. It is important for users because different layouts of the CALL section serve different modes of learning. This depends largely on whether the emphasis is on self-access learning or on small or large group classroom based learning within the lab. This can therefore be arranged according to different modes of learning i.e. individual

learning, group learning and flexible learning. There are some points which should be taken into account when designing the layout of the CALL section:

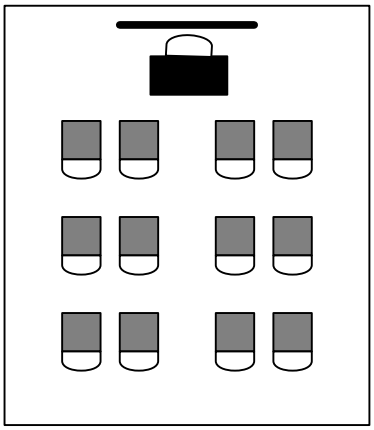
- Available space
- Lighting standards
- Amount of computers and furniture
- Security for equipment
- Best ergonomic interface between student and machine eg. chair: height adjustability, back tilt, durability and tip resistance, back design.

Individual learning vs. group learning

Individualized learning is often the main purpose of the SAC. Therefore the layout of the CALL section in the SAC should primarily be arranged to serve the needs of self-access learning. On the other hand, group learning, i.e. peer learning, small and large group learning, can be used for formal instruction. If the CALL section is used as a computerized classroom, the layout of the CALL section should facilitate teaching and learning. In fact, it can be designed in different patterns to reflect the needs and purposes of use, together with available space and the number of computers. The following are some suggested ideas for the arrangement of the CALL section:

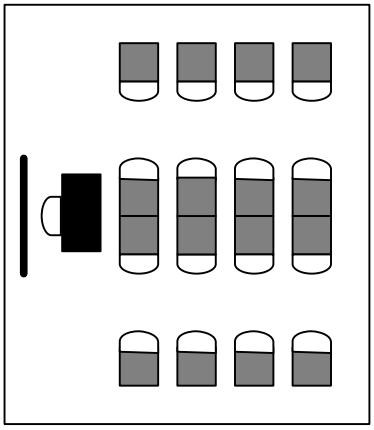
Desks in rows

A)



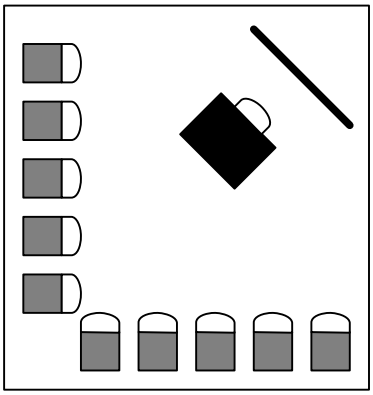
This layout can be used in both individual and peer learning. It is also good for a small group of learners involved in formal instruction.

B)



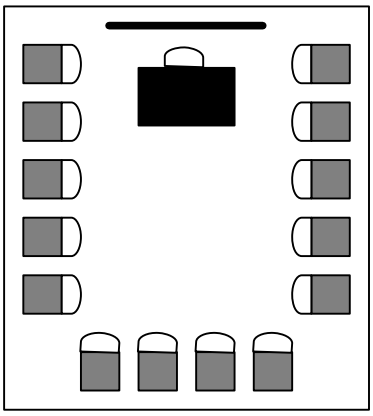
This type of layout is arranged in different pattern from A above. It is not only suitable for individual learning but also best used for group learning in pairs or small groups.

"L" configurations



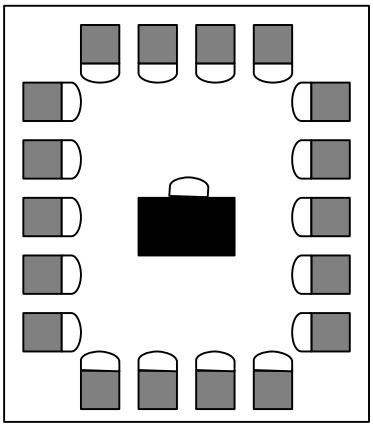
This L-shaped layout can be used in both group and individual modes of learning. In small groups, the teacher or supervisor can walk around easily and give feedback to students. Also, it is suitable for discussion in a plenary because students can rotate their chairs and focus their attention on the teacher.

"U" configurations



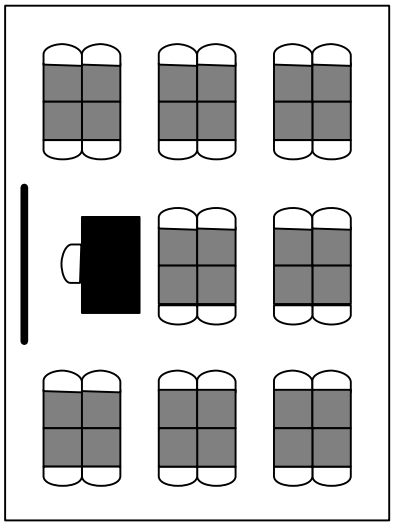
Like the "L" configurations, this layout supports group and individual learning and caters for discussion in plenary, but it allows more computers to be set up in the available space.

"O" configurations



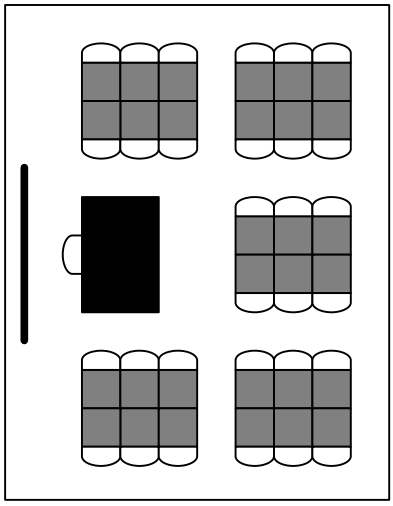
The O-shaped layout is suitable for individual and group learning. In group learning, learners can discuss in pairs, in small groups or even in plenary. This pattern is best used for a medium sized group of learners.

Clusters of 4 desks



This layout of 4-desk clusters can be used for self-access learning and group learning. It is also specially designed for a medium or large group of learners. They can engage in pairs or in small group discussion by rotating their chairs to form groups of 4.

Clusters of 6 desks



This layout of 6-desk clusters can be used for self-access learning and group learning. It is specially designed for a medium or large sized group of learners. They can also have a discussion in small groups.

Relationship of CALL layouts and modes of learning

CALL Layout	Individual Learning	Group Learning					
		Activity Type			Class Size		
		Pair	Group	Plenary	Small (1-15)	Medium (16-30)	Large (30 up)
Desks in rows (Type A)	✓	✓			✓	✓	✓
Desks in rows (Type B)	✓	✓	✓			✓	
"L" configurations	✓	✓	✓	✓	✓		
"U" configurations	✓	✓	✓	✓	✓		
"O" configurations	✓	✓	✓	✓		✓	
Clusters of 4 desks	✓	✓	✓			✓	✓
Clusters of 6 desks	✓		✓			✓	✓

CONCLUSION

The management of computer assisted language learning in the self-access centre is certainly one of the most important factors that can influence the effectiveness of CALL. The better CALL management is, the more effective CALL will be. Therefore, SAC managers should be aware of the process of CALL management which includes the 4 following stages: planning, implementation, evaluation and maintenance. Furthermore, user policy development is another factor which cannot be overlooked. This includes regulations of the use, technical support, maintenance and security, training, and the layout of the computer lab. However, one of the major duties of the SAC managers is to effectively run the SAC including the CALL section. In other words, they should realize the real needs of users and the main purposes behind the use of CALL. They should then plan, design and implement the ideas to bring this into practice. Finally, to maintain a high level of service, they should periodically evaluate the effectiveness of the facilities and procedures so that they can make adaptations to keep the lab *"customer focussed".*

3 Using the Internet for English Language Teaching

Puangpen Intraprawat

INTRODUCTION TO THE INTERNET

What is the internet?

The internet is a network of networks that is, a world wide group of interconnected networks which allows people and computers to communicate and share resources. No one party controls the internet.

The internet has been used since the early 1970s. However, it was not attractive to the public until the late 1980's when a physicist Dr. Berners-Lee, who was working at CERN (European Particle Physics Laboratory), invented a computer protocol called HTML (Hypertext Markup Language). This protocol allowed researchers working at different locations to share information regardless of their computer platform and became a standard format for electronic document exchange. Later, CERN publicised the project, and it was enthusiastically taken up by a number of researchers, universities and government organisations.

Then, in 1992 a web browser called The NCSA Mosaic (National Center for supercomputing Applications) was invented. This browser helped computer users to access any web site and gave a graphical user interface to viewing web pages. Soon, people started to create their own web sites using all kinds of graphics as well as sound and video files. The web has become very popular because it is quick and easy to use, incorporates multimedia, and can access information around from the globe in an instant. Now, *'the web'* has entered the popular imagination and spans commercial and non-commercial organisations in (almost) every country. The popularity of the internet is such that in November, 1999 there were 221,000,000 people around the world online (for current usage statistics see: www.euromkgt.com/globestats/).

How the internet works

All computers connected to the internet communicate with each other using computer languages or "protocols", commonly, the internet protocol (IP) and the hypertext transfer protocol (http). Documents encoded in these languages can be sent from one computer to another over a network.

Internet services

The internet is composed of the following services:

- The World Wide Web or a system for organising and accessing information (text, image, video, audio) over the internet.
- Electronic mail (E-mail) usually text, but graphics, audio, and video can be sent as attachments.
- Mailing lists for interest groups to exchange messages with each other.
- Chat in the form of written messages exchanged in real time.
- Telnet that a person logs on to another computer.
- FTP (File Transfer Protocol) that stores or retrieves files from a remote computer

The World Wide Web

What is the World Wide Web?

While the internet is a global network of computers; the Web is the system used to access and view information, including text, audio, video, graphics, etc. on the internet.

How to Find Information on the Web

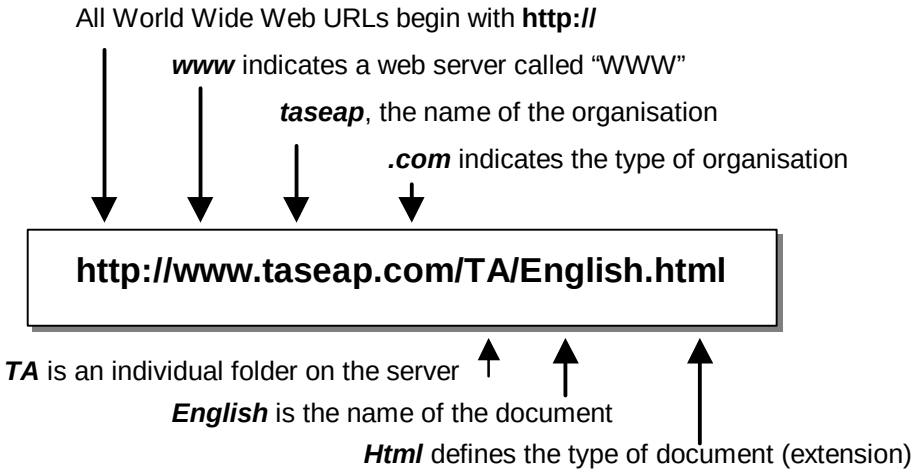
Information on the Web can be found by any of the following methods.

- Using an address or URL
- Net surfing
- Using subject directories
- Using search engines

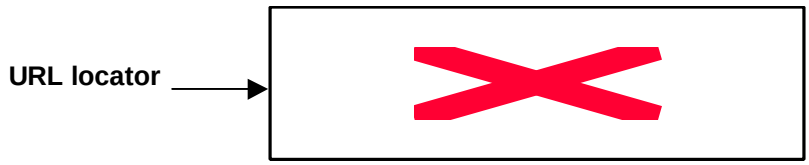
Finding web pages using an address or URL

URL stands for Uniform Resource Locator which is a unique address of a webpage. The URL of a web page is like the call number of a book. It tells the computer which web page to retrieve and where it is located.

For example: *http://www.taseap.com/TA/English.html*



The easiest way to use a URL to find information on the web is to copy and paste a known URL onto the URL locator on the Menu bar.



Finding web pages by net surfing

Starting with a good page and following links that look interesting.
This can be time consuming.

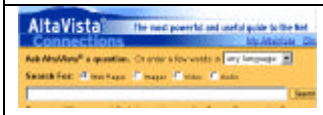
Finding web pages using subject directories (subject searching)

A subject directory is a listing of internet resources arranged by subject categories. Most subject directories have key word searching available.
Selected list of good subject directories:

Yahoo http://www.yahoo.com/	Magellan http://www.clearinghouse.net	EINET Galaxy Subject Catalog: http://www.einet.net/
		

Finding web pages using search engines (Key word searching)

A search engine is a program that searches documents on the Web. A user types specified keywords into the search blank, the search engine then returns a list of the documents . Normally, the term, “search engine” refers to the search engines themselves such as Alta Vista and Excite.
Selected list of search engines.

Alta Vista: http://www.altavista.com/	*Infoseek:* http://infoseek.go.com/	*Dogpile:* http://www.dogpile.com/
		

More search engines can be found from the following site:
http://owl.english.purdue.edu/files/128.html

More information on how to use Netscape N*avigator:*
http://home.netscape.com/eng/mozilla/1.2/handbook/docs/learn.html#C0

E-mail

E-mail or electronic mail is one function of the internet network. It has many applications, such as composing, sending and receiving messages. People on networks use e-mail to exchange information, communicate ideas, discuss issues, share files, and edit and review manuscripts. It is the most popular and heavily used function of the internet.

When you use e-mail, you will have to know two things: one is your e-mail address which is like your mailing address. You give it to others so that they can send e-mail to you. Another is your password, which only you know so no one else can read your mail.

An e-mail address looks like this: (this is mine) puangpen@ccs.sut.ac.th

Every email address has three parts:

- a user name (everything on the left of the @ sign)
- an "at" sign (@)
- the address of the user's mail server, or "hostname" (Everything on the right of the @ sign) . Your host name should be your institution or an organization's computer network.

Discussion groups and mailing lists

A discussion group or *listserv* is an automated mailing list comprised of people who share the same interest. They use an internet service called *listserv* to distribute messages to the group. You have to subscribe to become a member of any of these discussion groups.

Chat

People around the world can “talk” to each other by “going” into virtual chat rooms. In these chat rooms, you can "talk" and "listen" to people by typing on your keyboard and reading messages on your screen in real time. You should follow rules of netiquette (conventions for communicating online) when using these rooms. Basic chat room language and guidelines can be found here: http://www.esl-lab.com/courses/keypal.html#list

WEB SITES FOR ENGLISH LANGUAGE LEARNING

English language teachers can make use of the internet in many different ways. For example, it can be used for reading practice, as a source of material development, or to supplement classroom activities. Web pages can be downloaded and printed. Online resources can be best used if the teacher as part of their curriculum as well as in the SAC. The web sites listed in this section have been carefully selected as an introduction to the breadth of resources available to both students and teachers. Some of them are geared toward specific skills, while others can be used as references:

Multi-resource Websites

Dave Sperling's ESL Café **Multi-resource Websites**

http://www.pacificnet.net/~sperling/eslcafe.html

This is a web site which has excellent resources for teachers and students. A wide range of resources and activities are presented. It is recommended as a good starting point for on line CALL resources.

Selected Links for Students of English as a Second Language **Multi-resource Websites**

http://www.aitech.ac.jp/~iteslj/ESL.html

This is a good list of links to other ESL Web sites. Hosted by the Internet TESL Journal, it is Intended for ESL students. Links include "Games", "Grammar", Communicating with Others", "Listening", "Writing" and "Reading.

Linguistic Fun Land **Multi-resource Websites**

http://www.linguistic-funland.com/tesl.html

This is another site that is cited quite frequently. Teachers and students can find numerous resources and activities.

ESL Independent Study Lab ***Multi-resource Websites***

http://www.lclark.edu/~krauss/toppicks/toppicks.html

This is quite a comprehensive site for students. Each category contains activities separated into different levels. The language skill categories are well maintained.

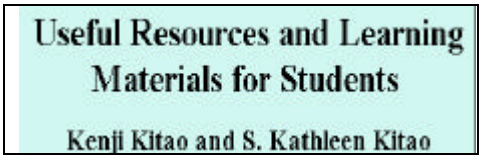
Andreas Lund- English as Another Language ***Multi-resource Websites***

http://home.sol.no/~anlun/

Once again, this is a comprehensive site, and worth a look! Beside many other language activities, students might find two activities, in particular, most fascinating: Mazes and Web projects.

Useful Resources and Learning Materials for Students **Multi-resource Websites**

http://www.ling.lancs.ac.uk/staff/visitors/kenji/student.htm



This is a very useful starting point for learner materials. There are a variety of links that students can use as resources or for language practice.

Englishtown **Multi-resource Websites**

http://www.englishtown.com

There are many resources and activities where students can improve their English on this professionally produced site. There are chat rooms, games, an International Pen Pal Club, meeting areas, as well as ESL/EFL lesson plans for teachers.

Kathy Schrock's Guide for Educators **Multi-resource Websites**

http://discoveryschool.com/schrockguide/

This site contains lists of activities for English language learning. Students with all levels of proficiency can practice various language skills: listening, pronunciation, vocabulary, reading, writing, grammar, games and TOEFL.

Interactive Activities for students

The Quiz Zone **Interactive Activities**

http://www.geocities.com/RainForest/Vines/8255/esl6.html

There are two sites here for students to test their English knowledge and skills: ESL6 and ESL7. Quizzes include grammar, reading comprehension, speaking, listening, etc.

Karin's ESL PartyLand **Interactive Activities**

http://www.eslpartyland.com/students/learn.htm

Many activities are available for students to practice their English language in this site. They are interactive quizzes, real time chat, discussion groups, and opportunities to talk about popular themes with e-pals.

ESL Online **Interactive Activities**

http://www.ouc.bc.ca/ContEd/ce-inter/ONLINEindex.html

Students can prepare for international English tests (Test of English as a Foreign Language – TOEFL and the Test of English for International Communication - TOEIC) besides several other listening activities

ABC Toon Center **Interactive Activities**

http://www.frontiernet.net/~jackson/journal.htm

This site is not really designed specifically for ESL, there are many fun things to do. Students can read children stories and play games and puzzles.

Oz ESL Online **Interactive Activities**

http://www.powerup.com.au/~ozesl/index.htm

At this site, students can learn English as well as have access to information about Australian.

English Page **Interactive Activities**

http://www.englishpage.com/

These are on-line lessons for intermediate and advanced students. It includes Weekly Lessons as well as a Lesson Archive.

Allexperts.com **Interactive Activities**

http://www.allexperts.com/

ALLEXPERTS.COM

Students can ask expert volunteers e-mailed questions. The process is quick and easy. They just simply select a category, click on the name of the expert they want to ask a question. Then, within a few days, they will get the response!

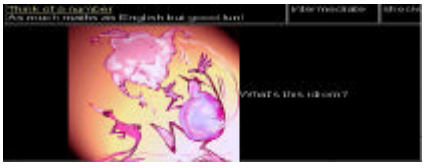
Cutting Edge **Interactive Activities**

http://www-writing.berkeley.edu/chorus/call/cuttingedge.html

At this site, there are interactive activities for students to practice their English language skills. They include both integrated and individual skills.

Wicked Stuff for English learners **Interactive Activities**

http://www.stuff.co.uk/wicked.htm



There are all kinds of interactive activities for various levels of ESL students, including: Vocabulary, Pronunciation, Testing- TOEFL Practice, Listening, Reading.

VLC Hong Kong Virtual Language Center ***Interactive Activities***

http://vlc.polyu.edu.hk/

This is quite a comprehensive site for students to search for information and practice their English skills. It includes exercises for English grammar, reading, and games.

Specific English Language Skills and Areas

The Listening Lounge **Listening**

http://www.englishlistening.com/

This is a great site to begin your exploration of online listening activities. Students can learn English by listening to authentic listening passages from this site.

Integration of Reading, Listening and Speaking Skills **Listening**

http://www.ehq.com/li/eslpit/

This site contains a few stories for listening comprehension and a number of phrases used in everyday English.

Talking point on air **Listening**

http://news1.thls.bbc.co.uk/hi/english/talking_point/talking_point_on_air/default.asp

This is part of the BBC site that contains excellent listening passages with supplementary texts. Debates about controversial issues are available.

BBC English Radio-English Language Learning and Teaching **Listening**

http://www.bbc.co.uk/worldservice/learningenglish/index.shtml

The BBC's World Service radio gives some great tips for students to start learning via radio programmes. Its "*introduction*" gives an overview to the site.

ex-CHANGE **Speaking**

http://deil.lang.uiuc.edu/exchange/

This site gives second language students the opportunity to express themselves using the English language in a variety of ways. The approach is to show students methods of oral communication.

Virtual Presentation **Speaking**

http://www.ukans.edu/cwis/units/coms2/vpa/vpa.htm

This site does not provide a place for students to practice their speaking. But it is the place where students can learn how to prepare themselves for an oral presentation. It contains hints and tips.

News for English Language Learners **Reading**

http://www.bangkokpost.net/education/home.htm

This is one of the most cited web sites for lessons designed for reading enhancement. Students can learn new vocabulary, practice their reading comprehension, learn various translation methods, etc from the Bangkok Post, a major English Language newspaper of Thailand.

Learning with Mysteries **Reading**

http://www.thecase.com/ and http://www.mysterynet.com/learn/

Mysteries are great for teaching critical thinking, reading, and writing skills, and they utilise a higher order level of thinking. There are two sites here for students to practice their thinking skills. The stories are good.

Instant Lessons **Reading**

http://www.english-to-go.com/etgsite/visitors/

A complete lesson is added each week for teachers to print out and use in the class-room. Students can do the exercises on their own because answer keys are also included. The reading texts are based on Reuter news articles.

CNN Interactive Learning Resource **Reading**

http://literacynet.org/cnnsf/archives.html

This site offers lessons based on current and past CNN San Francisco bureau news stories. The reading selection and various interactive activities are aimed at students with reading levels not high enough to read and understand standard newspaper articles.

Reading Comprehension **Reading**

http://vlc.polyu.edu.hk/comp/ReadComp.htm

A number of reading comprehension exercises for students are provided. All of the reading passages are adapted from the South China Morning Post.

Reading Materials for EST **Reading**

http://www.learner.org/exhibits/garbage/intro.html

This site provides an excellent introduction to the problem of global waste management and some possible solutions.

How Stuff Works **Reading**

http://www.howstuffworks.com

Many common appliances, machines, and technologies are presented such as UPC bar codes, bread, digital clocks or watches, compasses, and microwave ovens. The excellent diagrams and simple explanations make this a good site for EST teaching.

Newton's Apple **Reading**

http://ericir.syr.edu/Projects/Newton/index.html

These are science lessons on PBS including topics such as bee stings, AIDS, blood typing, jungle survival, and dinosaurs. Each lesson offers questions to consider, discussion, activities for children to try, and further reading references.

Interactive Learning Resources **Reading**

http://www.otan.dni.us/cdlp/education/other.html

These Web pages focus on utilising current news stories for educational purposes. The lessons can be used for group activities or as individualised learning.

Frizzy University **Writing**

http://thecity.sfsu.edu/~funweb/

At this site, there are virtual classrooms, E-mail exchange activities, and many useful links for students to practice their English. This is recommended for those wanting to establish pen-pal links overseas.

The UVic Writer's Guide **Writing**

http://www.maclab.uvic.ca/writersguide/Pages/MasterToc.html

This site provides extensive guides to writing, with some follow up exercises for students to practice.

OWL: Purdue Writing Lab **Writing**

http://owl.english.purdue.edu/

This site has been frequently cited for its great resources on how to improve writing skills. More than 130 handouts on writing are available.

Writing Your Electric Postcard **Writing**

http://postcards.www.media.mit.edu/PO-bin/filloutPostCard.perl

Students can choose different types of postcards, writes a short note and send them onto their friends or classmates. An example of postcard is shown.

E-mail Project Home Page **Writing**

http://www.otan.dni.us/webfarm/emailproject/email.htm

This site is quite easy to access. Its directions are simple . Some stories can be great topics for discussion.

Guide to Grammar and Writing **Grammar**

http://webster.commnet.edu/HP/pages/darling/grammar.htm

This is an extensive guide to effective use of the English language. Many interactive quizzes and exercises are included.

Elements of Style - Strunk, William. 1918 **Grammar**

http://www.bartleby.com/141/

The classic text on grammar and composition is now on line. Students can check out the list of words and expressions commonly misspelled or misused.

EnglishCLUB.net: Grammar **Grammar**

http://www.englishclub.net/study/grammar/index.htm

It presents tutorials and quizzes on aspects of grammar such as verb tenses and prepositions.

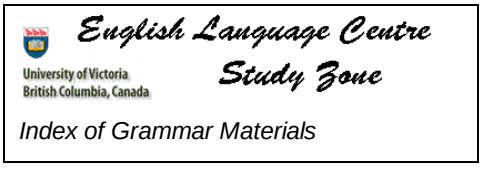
The Hampstead School of English's Online English Grammar **Grammar**

http://www.edunet.com/english/grammar/toc.cfm

This site not only act as a book of reference to On-Line English grammar but also it contains English Language Practice Pages and English Grammar Clinic where students can send their English grammar questions experts.

Index of grammar materials **Grammar**

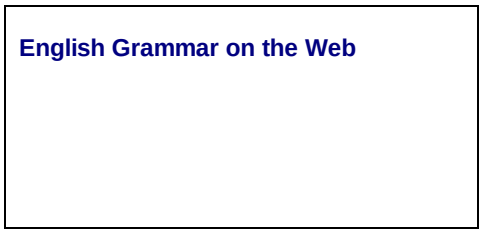
http://web2.uvcs.uvic.ca/elc/studyzone/grammar.htm



Students can do a number of grammatical exercises here. This website belongs to the University of Victoria, British Columbia, Canada. It includes tenses, conditionals, adjectives, adverbs, articles, prepositions, etc.

English Grammar on the Web **Grammar**

http://www.gsu.edu/~wwwesl/egw/index1.htm



This website is organized by a grammar expert at Georgia State University, US. These lists have been prepared for ESL students so that they can have more grammatical practice. But various types of Grammatical exercises from *The Heinle & Heinle Inventory of Published Grammar Activities* *will prove very helpful for teachers.*

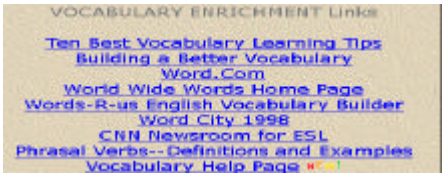
Grammar Safari **Grammar**

http://deil.lang.uiuc.edu/web.pages/grammarsafari.html

There are suggestions for word "hunting" and "collecting" with examples of specific words as they are used on the Web. It may be too complicated for beginners, but helpful to students preparing for TOEFL.

Vocabulary Enrichment **Vocabulary**

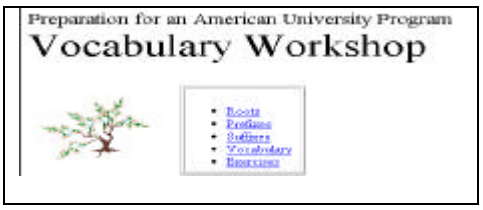
http://members.tripod.com/~hakancan/bookmarks.html#VOC



This is a site which students can do many exercises to improve their vocabulary. There are also many useful links to other sites which are focused on vocabulary learning.

Vocabulary Workshop **Vocabulary**

http://www.southampton.liunet.edu/academic/pau/course/webesl.htm



Meanings of prefixes and suffixes with a list of vocabulary to study.

General resources

Merriam-Webster's Collegiate(R) Dictionary **Dictionary**

http://www.facstaff.bucknell.edu/rbeard/diction.html

It is convenient for students to search for words using this dictionary. It is based on Merriam-Webster's Collegiate(R) Dictionary, 10th Ed.

The Collins Cobuild Student's Dictionary **Dictionary**

http://talisker.linguistics.ruhr-uni-bochum.de:8099/ccsd-set.html

This is another on line dictionary which is easy for students to use.

Documentation and Citation Styles

Internet, APA and MLA Citation Styles **Citation**

http://uwc-server.fac.utexas.edu/citing/

This site includes information of how to cite documents using APA and MLA formats as well as documents from the Web.

Internet, APA and MLA Citation Styles **Citation**

http://uwc-server.fac.utexas.edu/citing/

APA and MLA styles guides are offered at this site. Many other sites dealing with documentation can be linked from this site.

Teachers' Resources

Volterre-FR **Multi-resources**

http://www.wfi.fr/volterre/home.html

This is one of the web sites that has been mentioned for their excellent ESL/EFL resources from France. Teachers can find a lot of resources and activities here.

Aardvark's EFL Resources **Multi-resources**

http://www.baysights.com/aardvark/

This is the site that can be used as a guide to resources and contacts for students and teachers of English.

LAN618 Resource Page **Multi-resources**

Http://www.fed.qut.edu.au/tesol/resource1.html

It is a collection of useful resources at Queenland University of Technology for a course called Technology and Second Language Learning (LAN 618).

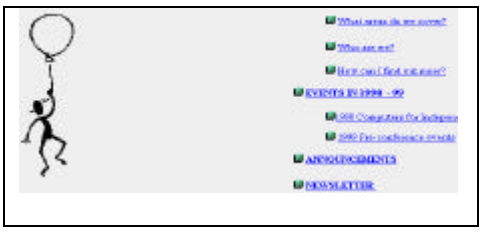
Internet Treasure Hunts **Multi-resources**

http://elicos.qut.edu.au/treasure.html

Teachers can find useful information on how to use web pages for their teaching.

Learner Independence SIG Home Page **Multi-resources**

http://www.iatefl.org/lisig/lihome.htm



Teachers can find out more about special interest groups as well as find more information about teaching, lesson planning and sites of interests from the its extended collection of links.

Journals For Teachers of English as a Second Language **Journal**

http://www.aitech.ac.jp/~iteslj/

It contains articles on lessons & lesson plans, teaching techniques, handouts & other classroom materials, and projects.

EST-L (English for Science and Technology) **Discussion Group**

http://www.u-aizu.ac.jp/~t-orr/estsub.html

This is the URL to join a discussion group (listserv) on English for Science and Technology. After you have joined, you will receive regular mails from other members of the group.

the ESL Discussion Center **Discussion Groups**

http://www.eslcafe.com/discussion/

This is one popular place for English language teachers to begin.

Neteach-L **Discussion Group**

http://www.tesol.net/neteach.html

At this site, English language teachers can find recommended websites to use in their teaching. New websites are rated and updated regularly.

Lesson Plans **Lesson plans**

http://humanities.byu.edu/classes/ling577na/index.html

Teachers can see samples of lesson plans prepared by graduate students taking language methodology class (either Dr. Anderson's or Dr. Henrichson's). Most lessons aim at teaching integrated language skills using task-based activities.

Internet Treasure Hunts **Lesson plans**

http://elicos.qut.edu.au/treasure.html

Teachers can find useful information on how to plan their language lessons and pick up teaching tips. There are also ready-made lessons which again can be adapted for use in ESL classrooms.

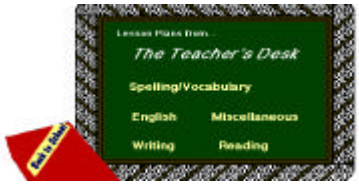
Karin's ESL Partyland **Lesson plans**

http://www.eslpartyland.com/teach3.htm

There are lots of lesson plans which teachers can print out or adapt to be used in class. The site also offers pages on teaching with film, teaching with music, and teaching with the Internet.

Lesson plans from Teacher's desk **Lesson plans**

http://www.knownet.net/users/Ackley/lessons.html



This site offers useful ideas for assignments, projects and activities. Even though it does not really aim at ESL students, ESL teachers can still find the ideas very valuable.

ESLflow **Lesson plans**

http://www.homestead.com/ESLflow/Index.html

This site has great resources for ESL teachers. The sources are classified according to English proficiency levels.. ESL teachers can also find valuable links to other sites which contain subject area content.

About Com **ESP resources**

http://about.com/

Teachers can find a great many resources for material development here. It includes expert guidance from hundreds of guides and useful tools to build vocabulary (ESP).

NY Learning Network **ESP resources**

http://www.nytimes.com/learning/

English language teachers can use a variety of articles for their material development as well as asking the students to do activities such as News Summaries, Daily News Quiz, Science Q & A, Crossword Puzzles and Ask a Reporter.

The Science Daily Magazine **EST resources**

http://www.sciencedaily.com/

ScienceDaily
Your link to the latest research news

Teachers of ESP can find various topics to be adopted as English lessons. The topics include health and medicine, plants and animals, matter and energy, earth and climate as well as computer and math.

Science **EST resources**

http://www.sciencemag.org/

This is a global weekly magazine (American Association for the Advancement of Science) which is another good source for developing materials for ESP classes.

Science Now **EST resources**

http://sciencenow.sciencemag.org/

This is a site that includes a daily news service (American Association for the Advancement of Science) .

New Scientist **EST resources**

http://www.newscientist.com/

The articles in this well-known magazine are readily accessible. Teachers will find many of them helpful for their material development.

HTML Resources : A Beginner's Guide to HTML **Creating a web page**

http://www.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html

This web site has excellent resources. Teachers and students can begin to explore the technology which is behind the Internet.

Annabella's HTML Guide **Creating a web page**

http://www.geocities.com/~annabella/html.html

A very user-friendly site! Simple step by step tutorials on writing basic HTML and building your first homepage.

Webmonkey for Kids **Creating a web page**

http://www.pacificnet.net/~sperling/eslcafe.html

Webmonkey is a fun way to show how to write a web page. It is targeted to children.

4 An evaluation matrix for reviewing commercial ELT software

Kitima Indrambarya

INTRODUCTION

During the past few years, computer-assisted language learning software (CALL) has gained an ever more prominent role in foreign language instruction. With an increasing amount of software available in the market, language teachers need to be able to identify good software, which is suitable for their students. The best way to identify the most suitable software is to undertake software evaluation both to compare software and to identify useful features. For language teacher's convenience, an evaluation matrix has been developed as a ready-to-use tool to help select the most appropriate commercial ELT software which is on the market.

The purpose of the matrix is to assist in:

- software evaluation
- buying software for academic institutions
- comparing multimedia CALL software
- undertaking staff development in the area of CALL
- developing in-house CALL software solutions

This chapter is divided into five sections. The first section provides an overview of CALL software. The second section is a guide to using the Evaluation Matrix. The third section introduces the Evaluation Matrix. Comparisons of four samples of commercial ELT multimedia software are presented in the fourth section, followed by individual reviews of the same software in section five. This is followed by a list of some common CALL applications, sorted by educational category. The last section provides a blank evaluation matrix ready for use.

What is the scope of CALL software?

CALL software is defined here as software which is designed to promote language learning with the following characteristics:

- software which focuses on the practice of language skills, language components and/or language functions

- software which promotes customised learning and allows individuality in selecting learning activities
- gives feedback to the learner
- promotes interaction between the student and the computer, or among students as a group

Keeping these criteria in mind, computer-based language games such as *Scrabble*, *Crossword*, and *Boggle* (on CD ROM) which aim to enrich learners' English vocabulary are considered CALL software in this chapter.

On the other hand, resource-based software such as Microsoft Encarta 98, *Compton's Interactive Encyclopedia 1998,* and *Britanica CD98* are not regarded as CALL software for there are no language learning objectives underpinning the design. Similarly, word processing software such as *Microsoft Word*, and presentation tools such as *Microsoft Powerpoint*, are tools for language learning, but are not specifically considered to be CALL software. These latter applications do not give immediate feedback or promote interaction among learners.

Even though the term '*software'* may include programs installed on hard disk, CD-ROM, and the internet, this section limits its scope to software which promotes English language learning in the form of multimedia CD ROM only, as this is the form of software which is most commonly used in educational institutions today.

Broad categories of CALL software

CALL software, especially that published on CD-ROM, is classified below into four broad types. These classifications are based on educational principles built into the software by their designers. For example, practice/drill approaches to CALL are generally built on behaviourist principles, while problem-solving and project-oriented (Pro-CALL) approach lean toward a constructivist/ communicative approaches (for a detailed discussion on this issue, refer to Chapter One in this resource book). The categorisations of CALL used herein are represented by the following types:

- *Tutorial*: These programs provide sets of language followed by practice and drill. Courseware, which is developed as an entire course with accompanying printed material and assessment tools, is also considered to be a type of tutorial.
- *Practice/Drill*: These programs focus on the reinforcement of practice.
- *Problem-solving / Simulation*: Some of these programs may not be designed directly for second language learners. Learners are challenged to take part in and solve problematic situations. These programs focus on developing critical thinking skills with the use of English language as the medium. They are both entertaining and educational and hence commonly referred to as 'edutainment'.
- *Game*: These programs use game activities to promote language learning indirectly.

USING THE EVALUATION MATRIX TO SELECT SOFTWARE

As there is a large amount of CALL software available in the marketplace, one question arises: How do we select CALL software which is most suitable for our students? This section introduces five steps as a guide to selecting CALL software for use in academic institutions: determine your needs and requirements, shortlist the software which you will evaluate, customize the (supplied) evaluation matrix to suit your needs, use the matrix to evaluate the software you selected, and finally make your selections or recommendations.

STEP 1 Needs Analysis and requirements determination

Needs Analysis

As with curriculum design, material has to be carefully selected so that it meets the needs of your students and fellow teachers. Similarly, software selection requires the same degree of care to ensure its usefulness. For example, after installation there may be a perception that the software is not practical. It may be too complicated to use, or it might be unsuited to the preferred mode of teaching. Its content may not match the curriculum. Clearly, a good understanding of the needs of your students and colleagues is an essential prerequisite to get value for money. The following key questions should be considered prior to evaluation and purchase:

- What is the typical profile of your students?
- What is their level of proficiency?
- What type of English are they most interested in?
- What language skills do they need?
- What is their intended use of English?
- What are your colleagues' expectations of CALL software?

User Training

User Training is an important issue to consider, both when selecting software, and when implementing it in your institution. Indeed, the cost of training may even outweigh the purchase price of the software. Many features of even the most common software applications remain under-utilised from want of adequate training. Although advertisements for CALL software emphasise terms such as 'ease of use' and 'user-friendliness', the reality is often quite the reverse. Different types of software require different levels of support and training, and may require close cooperation with your technical team to implement successfully. The extent to which students, teachers and technical staff are willing to undergo training is an important consideration before and after selecting new software. Determine the willingness of the users to engage at a technical level with the software, before committing to complicated CALL applications.

Institutional policies

In addition to technical considerations, your institution may have established policies and practices which may need to be taken into account. Institutional expectations must be addressed when vetting and selecting software. For example:

- Are students expected to study on their own, or use the facilities with technical support and educational guidance?
- How big is the size of the user group? Are multiple copies of software needed? Is a site license necessary?
- What are the policies and regulations of computer use in the SAC, and do these policies restrict the types of software which can be considered? (Refer to Chapter Two herein for a detailed account of SAC requirements and user policy issues).

Technical Considerations

Making the right choice begins with matching the new software to your technical specifications. Make sure the software you are reviewing will run on your system, or that you will be able to cover technological/infrastructural changes as required:

- Is the software compatible with existing hardware, operating system and computer network?
- Does it require extra hardware requirements (e.g. extra memory, special graphics and sound cards) or software requirements (e.g. Windows NT Server software)?

Budget

Your budget may ultimately be the limiting factor when determining your requirements and making a final selection. Needless to say, within your budgetary constraints, you should attempt to procure the widest and most suitable range of software you can. As mentioned before, you must make additional allowances and contingencies when calculating the cost of software, for, much of the expense may be tied up in hidden costs, which may not be apparent at the time of purchase. For example, there are the associated costs of:

- upgrading hardware, network infrastructure and system software to meet the demands of the CALL software upon installation
- training teachers, students and technical staff to support and effectively use the software
- maintaining and upgrading software to avoid obsolescence

Naturally, the scope of such considerations is dependent on the organisation at hand. Nevertheless, it is worth stressing again that the most suitable software may not be the most fancy, nor the most expensive, but that software which serves its purpose and compliments the activities of its educational environment. Be sure to know your needs before investing your time and money in new software.

STEP 2 Shortlist Software for Evaluation

Prior to evaluation, it is necessary to shortlist software from the range of alternatives available. You should attempt to quickly exclude those programs which do not meet your fundamental requirements (from Step One above). Next, you will need to determine which products are worth looking at in more detail. Here are a few successful ways of achieving this:

- Search for recommendations from other teachers, university personnel, and from information sources such as the internet (e.g. www.superkid.com).
- Try to get an evaluation copy of the software prior to purchase.
- If an evaluation copy is not available, get an expert informer (i.e. teacher, software distributor or software developer) and ask them leading questions.

STEP 3 Customize the evaluation matrix

Before using the evaluation matrix (below) to appraise software, you should identify the major criteria for software evaluation. The key criteria to be considered include:

- Matching of learning objectives to those contained in the software design
- The content of the CALL materials
- Program design and performance
- Degree of edutainment (the educational and entertainment values of the materials)
- Interface (ease of use and attractiveness of the program)
- Help features and support offered within the program
- The usefulness of multimedia resources in the activities
- Learner's control over navigation and sequencing in the program
- Teacher's role in guiding the use of the software and providing task consultation
- Assessment options available in the software
- Supplementary documentation for technical and educational support
- Technical considerations for implementation

Details of these and other criteria details are given in the following matrix (Table 1: Explanation of Matrix Terms). It is suggested you review the matrix terms and explanations, both as a guide to using the matrix (in the next step) and as a check list of what you may need to know before beginning evaluation in detail.

To customize the evaluation matrix to serve your needs, use the explanations of terms in the following matrix to decide which parts of the actual evaluation matrix are relevant or important to you. Cross out / delete aspects of the evaluation matrix which are too detailed for your purposes.

The evaluation matrix is divided into two parts:

Part 1 lets you tick ✓ next to the item if it is present in the software and/ or rate if the item can be evaluated on a scale. Note: some items can not be rated, and are therefore merely ticked to show whether they are present or not. You can use the scale recommended (1-3), shown as stars (★= poor, ★★ = fair, ★★★ = good) or use a more detailed scale (e.g. 1-5 or 1-7) if required. If an item is not applicable, write N/A.

Part 2 allows you to fill in general software and hardware information. Note that the greyed-out areas of the matrix do not need to be filled in. The blank evaluation matrix is available in the last section of this chapter.

Table 1: Explanation of Matrix Terms

Part I (T) = Tick, (R) = Rating

	Description
1. **User**	Who is the target audience?
Level:	What is the proficiency level of the user?
Beginner	Beginner Level **(T)**
Pre-Intermediate	Pre-Intermediate Level **(T)**
Intermediate	Lower-Intermediate Level **(T)**
Upper intermediate	Upper Intermediate Level **(T)**
Advanced	Advanced Level **(T)**
Age Group:	In what age group is the user?
Pre-school	Toddlers, aged 3-5 **(T)**
Children	Children, aged 6-12 **(T)**
Teenagers	Teenagers, aged 13-19 **(T)**
Adults	Adults, aged 20+ **(T)**
Purpose:	What type of English does the program focus on?
GE	General English **(T)**
ESP	English for Specific Purpose **(T)**
EAP	English for an Academic Purpose **(T)**
Learning Mode:	What kind of learning mode is the software suitable for?
Self-study	Self-instruction outside classroom in the topic of interest, with appropriate level of difficulty at their own pace **(T)**
Course-based	Use as part of the classroom instruction including classroom assignment **(T)**
2. **CALL type**	What is the overall category of the software?
Tutorial	Providing sets of language explanations followed by exercises. **(T)**
Drill-Practice	Practice and drill exercises as a reinforcement **(T)**
Simulation / Problem-solving	Developing a Critical thinking process while using English language
Game	Language games **(T)**
3. **Objectives**	What are the learning Objectives?
Explicit Learning Objectives	How explicit are the learning objectives? **(R)**
Match of activities to Objectives	Do the learning activities presented in the software match the learning objectives stated? **(T)**
4. **Language skills and components**	What language skills and components are included in the software?
Listening	Listening Skills **(T)**
Speaking	Speaking Skills **(T)**
Reading	Reading Skills **(T)**
Writing	Writing Skills (including spelling) **(T)**
Pronunciation	Pronunciation Skills **(T)**
Grammar	Grammar exercises **(T)**
Vocabulary	Vocabulary exercises **(T)**
Others (Please specify)	Specify other types of language focuses found in the program **(T)**

	Description
5. **Language Approach / syllabus**	What language approach does the software use?
Structural	The language content is sequential around grammatical structures (e.g. simple present tense, past tense, etc.) **(T)**
Communicative / Functional	The language content is organized around notions and functions (e.g. greetings, identifying, reporting, etc.) **(T)**
Other (Please Specify)	Specify any other language approaches used in this software
6. **Activity Type**	What kind of activities does the software use?
Drag & Drop	Drag the items to the most appropriate place **(T)**
Gap Filling	Type the correct answer into the blanks **(T)**
Multiple Choice	Choose the best answer **(T)**
Matching	Match items with another **(T)**
Reordering Items	Reorder words/phrase/sentences into correct order **(T)**
True/False	Choose whether the statement is true or false. **(T)**
Spelling/Dictation	Spelling or Dictation exercises **(T)**
Text Reconstruction	Reconstruct the texts based on cues given **(T)**
Short Answer/Writing	Write short answer or statement on a specified topic or questions **(T)**
Voice Recording	Record Voice **(T)**
Games	Games such as Hangman, Tic Tac Toe **(T)**
7. **Content:**	How well is the content designed?
Authenticity	How authentic is the material? Does the program use a native speaker's voice? **(R)**
Appeal	How appealing is the content of the software? **(R)**
Accuracy	How accurate is the content? Is it well-written? Is it grammatically correct? **(R)**
Order of Content Organization	How well is the content organized? Does it progress from lower to higher difficulty? **(R)**
Cultural Appropriateness	How culturally appropriate is the content? **(R)**
Appropriate Level of Difficulty	How appropriate is the content for the levels of proficiency of the students stated? **(R)**
Exercise Features:	What are the exercise features?
Appropriate number of Exercises	To what extent does the program contain a sufficient amount of exercises in each topic area? **(R)**
Helpfulness of Exercises	How helpful are the exercises/activities? **(R)**
Type of English Language Use:	What type of English language does the program use?
British English	British English **(T)**
American English	American English **(T)**
Australian English	Australian English **(T)**
Canadian English	Canadian English **(T)**
8. **Degree of Edutainment**	How enjoyable is the program? **(R)**
9. **Interface**	How smooth is the interface of the program?
Attractiveness	How attractive is the program? **(R)**
Pop-up Menus	Are there any pop-up menus? **(T)**
Use of Icons	How effective and easy-to-understand are the icons? **(R)**
Ease of use	How easy to use is the program? **(R)**
10. **Help features**	Is help available? **(T)**
Accessibility	How easily accessible is the help feature? **(R)**
Comprehensibility	How easy to understand is the help feature? **(R)**
Usefulness	How useful is the help feature? **(R)**
Adequacy	How adequate is the help feature? **(R)**

	Description
11. **Program Design & Performance**	How good is the program design and performance?
Interaction	How well does the software promote meaningful interaction between computers and learners? **(R)**
Clarity of Instructions/Prompts	How clear are the given instructions or prompts? **(R)**
Self-explanatory	How self-explanatory is the program? **(R)**
Possible Answer	Does the program allow more than one possible answer? (e.g. British & American Spelling) **(T)**
Program Feedback	Does the program give feedback on activities? **(T)**
Feedback Type:	What kind of feedback does the program give?
Indication of Correct and Incorrect Response	Does the program provide any indication of correct and incorrect responses? **(T)**
Hints to Correct Response	Does the program provide any hints/cues/prompts leading to correct responses? **(T)**
Opportunity to retry	Does the program allow users to retry if they get the wrong answer?
Incorrect response Explanation	Does the program provide any explanation of wrong response? **(T)**
Direction to relevant part of program for review	Does the program direct users to relevant parts of the program to review their answers? **(T)**
Others (Please specify)	Specify other types of feedback used in the program. **(T)**
Feedback Tone:	What kind of feedback tone does the program use?
Friendliness	Does the feedback tone sound friendly? **(T)**
Encouragement	Does the program give encouraging feedback e.g. compliments upon correct answer? **(T)**
12. **Use of Multimedia in the Activities**	How useful to the learning process is the multimedia in the activities?
Supplementary Script	Does the program use text/script for an audio or video? **(T)** How useful is it to the learning purpose? **(R)**
Match text with sound	Is there a match between the text and the sound? **(T)**
Hypertext	Does the program use hypertext? **(T)** Is the hypertext clearly indicated? How useful is the information given in hypertext? **(R)**
Graphics	Does the program use any graphics e.g. drawing, pictures **(T)** How useful, relevant to what is taught are the graphics? **(R)**
Animation	Does the program use animation? **(T)** How useful and relevant is it to the learning process? **(R)**
Audio	Does the program use audio? **(T)** How useful is it to the learning process? **(R)**
Video	Does the program use video? **(T)** How useful, attractive, and relevant is it to the learning process? **(R)**
Appropriate Rate of Speech	How appropriate is the rate of speaking? **(R)**

	Description
13. **Learner's Control**	How much control over the program do users have?
Printing Accessibility	Does the program allow users to print information? **(T)**
Internet Accessibility	Does the program allow Internet linking? **(T)**
Multi-windows Accessibility	Does the program allow users to use multi-windows functions or have control over the program windows e,g. minimize, maximize?**(T)**
Consistent Navigation	How consistent is the program navigation? e.g. Using same icons located in the same part of the screen to represent similar functions **(R)**
Ease of Navigation	How easy is it for learners to enter, leave the program, go back to an earlier part of the program, and access the menu?
Topic Selection	How much control does the user have in choosing topics of interest? **(R)**
Exercise Selection	How much control does the user have over choices of given exercises? e.g. can the user do exercises in any order? **(R)**
Option for configuring program:	Does the program allow users to alter program configuration? How useful is it? **(R)**
Volume Adjustment	Can students adjust the volume? **(T)**
Audio Control Availability	Can students record and play back certain parts of the audio with ease? **(T)**
Accessibility to Answer Key	Does the program allow users to access the answer key?**(T)** How easily accessible is it? **(R)**
File System Control	Does the program allow users to control saving and opening files? **(T)**
14. **Teacher's Role**	What is the teacher's role in using the software?
Customized Authoring Features:	Does the program provide customized authoring tools for teachers to author/add their own instructional materials ?
Programmable	Can the teacher author instructional materials in the way they desire based on a scripting language? **(T)**
Templates/Prescripts	Can the teacher author instructional materials based on given easy-to-use templates? **(T)**
On-line/Network Feedback	Does the program allow teachers to give feedback online or in a networking environment? Is there any student management system?
Task Consultation	Does any part of the program (e.g. writing, pronunciation) require consultation from teachers? **(T)**
15. **Assessment**	What kind of assessment does the program provide?
Quizzes / Tests	Does the program provide any quizzes based on the activities? **(T)**
Task Score	Does the program give scores for each activity? **(T)**
Record Keeping & Progress Report	Does the program keep records and/or show progress score report? **(T)**
16. **Supplementary documentation**:	Does the program offer any supplementary documents?
User Manual	Does the program provide a user manual? **(T)** How useful is it? **(R)**
Textbook	Is there a textbook accompanying the program? **(T)** How useful is it? **(R)**
Student's Workbook	Is there a student workbook accompanying the program? How useful is it? **(R)**
Teacher's Handbook	Is there a teacher's handbook accompanying the program? How useful is it? **(R)**
Answer Keys	Is there an answer key accompanying the program? **(T)** How detailed is it? **(R)**

	Description
17. **Platform**	What is the software operation system?
DOS	Dos, pre-Windows system **(T)**
Windows 3.1	Windows 3.1+ **(T)**
Windows 95/98	Windows 95, Windows 98 **(T)**
Windows 2000	Windows 2000 **(T)**
Windows NT	Windows NT **(T)**
Macintosh	Macintosh **(T)**
18. **Technical Consideration**	What technical issues need to be considered?
Ease of Installation	Is the program easy to install or uninstall? **(R)**
Program Sturdiness	How sturdy is the program? Does it contain bugs causing it to crash? Does the program function well? **(R)**
Text Quality	How easy is it to read the text? **(R)**
Graphic quality	How well-designed are the graphics? Are illustrations clearly labeled? **(R)**
Sound quality	How good is the sound quality? Is it intelligible, clear? **(R)**
Loading Speed	How fast does the program load? **(R)**
Microphone	Is microphone needed? **(T)**
Technical Support:	What kind of technical support is available?
Manual	Does the program provide a troubleshooting section in the user manual? **(T)**
Online Help	Does the program provide an online help/technical support? **(T)**
Phone Contact	Does the program provide a phone number to contact for technical assistance? **(T)**

Part II Software Information

	Description
Version	What is the version of the software?
Publisher	Who is the software publisher?
Year of Release	What is the year of release?
Cost	What is the cost of software?
Hardware Requirement	What hardware requirements are required to run the software?
Memory (Ram)	What RAM is required?
Hard Disk Space	How much disk space is required on the hard disk?
CD Rom / DVD Rom Speed	What is the minimum speed of CD Rom or DVD to run the software?

STEP 4 Evaluate the software by filling out the matrix

After having tried out the software, use the matrix to evaluate it. The Blank evaluation matrix can be found at the end of this chapter.

- Write the names of each piece of the software at the top of the matrix in a separate column.
- Eliminate those parts of the matrix which are not relevant (as per suggestion in step 3, above).
- Go through each relevant item in the evaluation matrix and fill it out.
- The content of some items may overlap with that of another category.
    - The help features (Category number 10) and online help in technical considerations category (Category number18).
    - English language Type: British and Australian English; American and Canadian English (Category number 7)
    - Audio and video (Category number 12)
    - Ease of use (Category number 9) and Ease of navigation (Category number 13)

STEP 5 Make overall evaluation and recommendation

- Pinpoint mandatory items. This will vary. What is mandatory and more important for one person may simply be optional to another. Mandatory items or quintessential requirements should be given a weighting when making your selection.
- Prioritizes the items and give a weighting to those which are more relevant to your educational goals.
- Items which are unchecked or unticked in the evaluation matrix may be absent because the program is not designed for that purpose, e.g. the microphone in category number 18 may be un-ticked if the software focuses on listening rather than speaking. The absence of such features cannot be viewed as a negative feature.
- Find out the special features that make the software different from a textbook or from classroom teaching.
- Recommend that software most appropriate for your educational, technical and strategic needs.

COMPARATIVE EVALUATION MATRIX

This sections presents a comparative evaluation matrix exemplifying four commercial software products. The software has been selected on the basis of the categories of CALL, mentioned earlier, as well as on convenience and on availability. These products are only samples of software available and by no means represent the best software in the market. The four pieces of software reviewed are:

- Issues in English (Tutorial type)
- Rosetta Stone (Practice / Drill type)
- Real English (Practice / Drill type)
- Oregon Trail II (Problem Solving type).

SOFTWARE EVALUATION MATRIX

Directions: Tick ✓ for items that is available on the software.
The rating scale: ★ = poor, ★★ fair, ★★★ = good
Write N/A for not applicable features in the software

***Note**:* the rating scale may be changed to a more detailed scale if required (1-7).
The greyed out areas of the matrix do not need to be filled in.

Part I

	Issues in English		**Rosetta Stone**		**Real English**		**Oregon Trail II**	
	Tick	Rating	Tick	Rating	Tick	Rating	Tick	Rating
1. **User**								
Level:								
Beginner	✓		-		-		-	
Pre-Intermediate	✓		✓		-		✓	
Intermediate	✓		✓		✓		✓	
upper intermediate	✓		✓		✓		✓	
Advanced	-		-		✓		-	
Age Group:								
Pre-school	-		-		-		-	
Children	-		-		-		✓	
Teenagers	✓		✓		✓		✓	
Adults	✓		✓		✓		✓	
Purpose:								
GE	✓		✓		✓		✓	
ESP	✓		-		✓		-	
EAP	-		-		-		-	
Learning Mode:								
Self-study	✓		✓		✓		✓	
Course-based	✓		✓		-		✓	
2. **CALL type**								
Tutorial	✓		✓		-		-	
Drill-Practice	-		-		✓		--	
Simulation / Problem-solving	-		-		-		✓	
Games	-		-		-		-	
3. **Objectives**								
Explicit Learning Objectives		★★★		★★★		★★		N/A
Match of activities to Objectives	✓		✓		✓		N/A	

	Issues in English		**Rosetta Stone**		**Real English**		**Oregon Trail II**	
	Tick	Rating	Tick	Rating	Tick	Rating	Tick	Rating
4. **Language skills and components**								
Listening	✓		✓		✓		✓	
Speaking	-		✓		-		-	
Reading	✓		✓		✓		✓	
Writing	✓		-		-		-	
Pronunciation	✓		✓		-		-	
Grammar	✓		✓		-		-	
Vocabulary	✓		✓		-		-	
Others (Please specify)								
5. **Language Approach**								
Structural	✓		✓		-		-	
Communicative / Functional	-		-		✓		✓	
Other (Please Specify)								
6. **Activity Type**								
Drag & Drop	✓		-		-		-	
Gap Filling	✓		-		✓		-	
Multiple Choice	-		-		✓		-	
Matching	-		✓		✓		-	
Reordering Items	-		-		✓		-	
True/False	-		-		✓		-	
Spelling/Dictation	✓		✓		✓		-	
Text Reconstruction	✓		-		-		-	
Short Answer/Writing	✓		-		-		-	
Voice Recording	✓		✓		-		-	
Games	-		-		✓		✓	
7. **Content:**								
Authenticity		★★		★★		★★★		★★
Appeal		★★★		★★		★★★		★★★
Accuracy		★★		★★★		★★★		★★★
Order of Content organization		★★★		★★★		★★		N/A
Cultural Appropriateness		★★		★★		★★		★★
Appropriate Level of Difficulty		★★		★★		★		★★
Exercise Features:								
Appropriate number of Exercises		★★★		★★★		★★★		N/A
Helpfulness of Exercises		★★★		★★★		★★		N/A
Type of English Language Use:								
British English	✓		✓		✓		-	
American English	-		✓		✓		✓	
Australian English	✓		-		✓		-	
Canadian English	-		-		-		-	
8. **Degree of Edutainment**		★★		★★		★★		★★★

	Issues in English		**Rosetta Stone**		**Real English**		**Oregon Trail II**	
	Tick	Rating	Tick	Rating	Tick	Rating	Tick	Rating
9. **Interface**								
Attractiveness		★★		★★		★★★		★★★
Pop-up Menus	✓		-		-		-	
Use of Icons		★		★		★★		★★
Ease of use		★★		★★		★★★		★★★
10. **Help features**	✓		-		✓		✓	
Accessibility		★★		-		★★		★★★
Comprehensibility		★★		-		★★		★★
Usefulness		★		-		★★		★★
Adequacy		★		-		★		★★
11. **Program Design & Performance**								
Interaction		★		★★		★★★		★★★
Clarity of Instructions/prompts		★		★★		★★		★★
Self-explanatory		★★		★★		★★		★★
Possible Answer	-		-		-		N/A	
Program Feedback	✓		✓		✓		N/A	
Feedback Type:								
Indication of correct or Incorrect response	✓		✓		✓		N/A	
Hints to correct response	-		-		✓		N/A	
Opportunities to retry	✓		✓		✓		N/A	
Incorrect response Explanation	-		-		-		N/A	
Directions to relevant program for review	✓		-		✓		N/A	
Others (Please specify)								
Feedback Tone:								
Friendliness		★		★★		★★		N/A
Encouragement		★		★		★		N/A
12. **Use of Multimedia in the Activities**								
Supplementary Script	✓	★★	✓	★★	✓	★★★	✓	★★
Match text with sound	-		✓		✓		✓	
Hypertext	✓	★★★	-	-	-	-	-	-
Graphics	✓	★★	✓	★★	✓	★★★	✓	★★★
Animation	-	-	-	-	-	-	✓	★★
Audio	-	-	✓	★★★	-	-	✓	★★
Video	✓	★	-	-	✓	★★★	-	-
Appropriate Rate of Speech		★★		★★★		★★		★★

	Issues in English		**Rosetta Stone**		**Real English**		**Oregon Trail II**	
	Tick	Rating	Tick	Rating	Tick	Rating	Tick	Rating
13. **Learner's Control**								
Printing Accessibility	✓		-		-		-	
Internet Accessibility	-		-		✓		-	
Multi-windows accessibility	-		-		✓		✓	
Consistent Navigation		★★		★★★		★★★		★★★
Ease of Navigation		★★		★★★		★★★		★★★
Topic Selection	✓	★★★	✓	★★★	✓	★★★	✓	★★★
Exercise Selection	✓	★★★	✓	★★★	✓	★★★	✓	N/A
Option for configuring program:	-	-	✓	★★	✓	★★★	✓	★★
Volume Adjustment	✓		✓		✓		-	
Audio Control Availability	-		-		✓		-	
Accessibility to Answer Key	✓	★	-	-	-	-	N/A	N/A
File System Control	-		✓		✓		✓	
14. **Teacher's Role**								
Customized Authoring Features:								
Programmable	-		-		-		N/A	
Templated	-		-		✓		N/A	
On-line/Network Feedback	-		✓		-		N/A	
Task Consultation	✓		-		-		N/A	
15. **Assessment**								
Quizzes / Tests	✓		✓		✓		N/A	
Task Score	✓		✓		✓		N/A	
Record Keeping & Progress Report	-		-		✓		N/A	
16. **Supplementary documentation**:								
Manual	✓	★★	✓	★★★	✓	★★	✓	★★★
Textbook	-	-	-	★★★	-	-	-	-
Student's Workbook	-	-	✓	★★★	-	-	-	-
Teacher's Handbook	-	-	✓	★★★	-	-	-	-
Answer Keys	-	-	✓	★★★	-	-	-	-
17. **Platform**								
DOS	-		-		-		-	
Windows 3.1	✓		✓		-		✓	
Windows 95/98	✓		✓		✓		✓	
Windows 2000	-		-		-		-	
Windows NT	-		-		-		✓	
Macintosh	-		✓		-		✓	
18. **Technical Consideration**								
Ease of Installation		★★★		★★★		★★★		★★★
Program Sturdiness		★★		★★★		★★★		★★★
Text Quality		★★		★★		★★★		★★★
Graphic quality		★★		★★★		★★★		★★★
Sound quality		★★★		★★★		★★★		★★★
Loading Speed		★★★		★★		★★★		★★★
Microphone	✓		✓		-		-	

	Issues in English		**Rosetta Stone**		**Real English**		**Oregon Trail II**	
	Tick	Rating	Tick	Rating	Tick	Rating	Tick	Rating
Technical Support:								
Manual	✓		✓		✓		✓	
Online Help	-		-		✓		-	
Phone Contact	✓		✓		✓		✓	

Part II Software Information

	Issues in English	**Rosetta Stone**	**Real English**	**Oregon Trail II**
Version	N/A	2.3.2	N/A	1.3
Publisher	Protea Textware	Fairfield Language Technologies	Wiser Software	Learning Company
Year of Release	1996	1998	1998	1996
Cost	$104	Level 1: $330 Level 2: $390	$99.95	$14.95
Hardware Requirement	486-66	486DX	486	486
Memory (Ram)	8MB	8MB	8MB	8MB
Hard Disk Space	18MB	11MB	20MB	12MB
CD Rom / DVD Rom speed	2x CD Rom	2x CD Rom	2xCD Rom	2x CD Rom

REVIEWS OF SOME COMMERCIAL ELT SOFTWARE

This section presents brief summary reviews of the four pieces of commercial ELT software which were evaluated in the previous section, namely *Issues in English, Rosetta Stone, Real English, and Oregon Trail II*. The review addresses the following four aspects:

- Descriptions
- Advantages
- Limitations
- Recommendations

Issues in English

	Issues in English
Description	*Issues in English* is an example of traditional tutorial CALL software. The program consists of 32 video clips. Eight controversial issues (animal rights, environment, smoking, gambling, public transport, growing old, euthanasia and discrimination) are presented at four levels of difficulty from beginning to Upper Intermediate levels. Each issue starts with a video clip with an option of seeing a script. The script contains hypertext giving a pictorial meaning where possible, otherwise short definitions or synonyms. The video clip is followed by choices of various types of exercises including listening comprehension, dictation, grammatical explanation and exercises, vocabulary, pronunciation and writing activities.
Advantages	• Teaching points and indexes are helpful for teachers to see language focus. • The listening text contains controversial issues which are quite appealing to all audiences. • Four language levels of difficulty for each topic offer flexibility for independent learning to match learners of different levels and of different language backgrounds. • The listening text for each language level differs by text length as well as by vocabulary choice. • The use of hypertext in giving pictorial meaning where possible allows students to readily capture word meaning. • Both students' answers and grammatical references may be printed out for self-study purposes.
Limitations	• Monotonous 'No' is given without any hints to the correct answer for all activities. • Not much difference in the rate of speech in the three higher levels of proficiency. • Navigation graphic icons are not readily comprehensible (e.g. menu, exit, exercise, test icons) • The answer key is only available through printing. • The use of video clips is of little educational value because it does not make use of the visual aspects of video. • Help is not easily accessible and rather inadequate
Recommendations	*Issues in English* contains very interesting controversial issues for listening exercises. Moreover, it can lead to a classroom discussion and writing assignments. It is recommended to accompany classroom tasks, especially for writing activities, as it requires teacher's consultation.

Rosetta Stone

	Rosetta Stone
Description	*Rosetta Stone* is untraditional in its approach to tutorial multimedia courseware. The program uses selected pictures to convey the concept of words and sentences effectively. The program is composed of 2 language levels: English level 1 (Beginners to Pre-Intermediate) and English level 2 (Intermediate to Upper-intermediate). Level 1 consists of 8 units (92 lessons including reviews); Level 2 consists of 11 units (118 lessons including reviews). Each unit contains 10 lessons plus a review lesson. Each lesson contains 10 screens, each of which has 4 pictures. The program is available both for stand-alone or for a network system. The program emphasizes all four language skills. Each of the units is available in 12 "run modes" (featuring listening, reading, speaking and writing skills) plus a reference tool and tutorial functions in which students can get an overview of all the materials and test themselves. The program is accompanied by a user guide, a student workbook, an answer key and a teacher's handbook. The program also offers a Student Management System for teacher to keep record of students.
Advantages	• Non-traditional way to teach grammatical and functional concepts effectively through pictures and cartoons especially on tense, giving directions, etc. • Flexible control by user: volume control, choice of feedback icons and sound, timer setting, delay options for viewing pictures and sound, saving files on a disk, etc. • Ability to enter, leave the program, and move on to the next level of the same unit any time. • Two separate versions of English language are available: British English and American English. • A variety of choices, regarding language skill types: listening and reading (with or without picture given), listening with picture given, reading with picture given, dictation, and speech reproduction. • Voice recording feature allows students to compare their voice with that of the native speaker's. • Student Management System allows teachers to design and control the content and keep record of student progress . • Helpful student's workbook and teacher's handbook provided.
Limitations	• No indication on how far learners must continue to finish the exercise or test. This can be frustrating to learners. • Limited type of exercises: only picture matching, dictation and voice recording are available. • Only still pictures are used in the program. • A rather confusing way of grouping the "Run menu" mode. • No hints for correct answer are given. • In the middle of the units, it is not possible to change control options. • Some icons are not readily comprehensible e.g. menu. • To move on to the next question, learners must first get the correct answer (4 tries).
Recommendations	*Rosetta Stone* lets students effectively capture the grammatical and functional concepts of language through pictures. It is most suitable to be used in association with a language course – classroom use or a class assignment – particularly as reinforcement of grammatical points and language functions. The student management system enhances teacher's control over the language content and keeps records of students.

Real English

	Real English
Description	*Real English* is a practice/drill type of multimedia software, focusing mainly on listening skills. The program features authentic English in real life situations in the form of interviews, conversations and news. The program consists of 4 CD volumes, namely, travel, sports, entertainment, and business. To start, students need to choose a module, followed by a unit and an exercise topic before choosing one of the following exercises: multiple choice, gap filling, sequencing text, matching text, and true/false. The program also allows a self-test option for learners.
Advantages	• Intriguing topics which are appealing to learners • Matching of sound and text helps ease the listening difficulty for language learners. • Good listening comprehension and recognition practice for language learners • An authentic English setting • Repetitive use of the same video clip in all exercises from a particular module help reinforce learner's language skills • The same publisher also provides an easy-to-do customised authoring template for teacher to create their own lesson (Wiser Educator) at an additional purchase • Maximizes learner control: configuration change, number of gap setting, request for free words in the gap filling exercises as well as choice of entering or exiting the program at any time • Incorporates games such as anagram and hangman as hints in the gap filling exercises. It is helpful and entertaining for students. • Online score with correct answer are illustrated. • User-friendly
Limitations	• Only listening skills are reinforced. • Cannot load dictionary. • Repetitive use of the same video clip for all exercise types (with paraphrased questions asked) which are ordered in the same sequence can bore learners who may simply leave the exercises before getting to the end of each exercise. • Matching text and sequencing text exercises have little educational value, e.g. testing the recognition level of language rather than comprehension level. • Some topics are more difficult than others due to real life situation e.g. interview, news is much more difficult than daily life topic such as going to the movie. • Test does not randomise questions. It is hard to know whether students do well in the test because they understand better after a few repetitions or because they remember the position of answer.
Recommendations	*Real English* offers extensive listening practice in an authentic setting. It has excellent learner control features. The program is most suitable for independent learning from intermediate to advanced levels.

Oregon Trail II

	Oregon Trail II
Description	*Oregon Trail II* is a multimedia simulation problem solving game, which is designed to create interaction through problematic situations and conditions. It is challenging for the learners to solve. The player takes a character's role and makes a series of decisions to guide his/her party from across the U.S. continent (in 1840s - 1860s) from Independence, Missouri to Oregon and California in a covered wagon. These decisions begin with choosing a departure date. Then the player has to make daily decisions relating to pace, restocking and direction. The player faces a series of obstacles such as fires, floods, cold, injuries, water shortage, poisonous water, sickness, food spoilage, etc. The player has to make many decisions. Upon reaching their destination, they will receive a deed to a plot of land or a chance to prospect for gold. It is their first step in settling up a new life in the western territories.
Advantages	• Makes the most out of multimedia, which incorporates text, graphics, sound, and animation to motivate learners. • Challenging to the learners since it is a simulation problem-solving game. • Authentic and very close to the real life of the immigrants of those days. • Encourages the learners to work cooperatively. They have to discuss and make important decisions together. • Flexible learner's control over the program operation e.g. save/open file, volume and sound adjustment, enter or leave the program any time, etc.
Limitations	• Biased towards American culture and history. • EFL learners without American historical background will be lost without pre-program guidance. • Only listening and reading skills are reinforced.
Recommendations	Oregon Trail II is very good edutainment software for language learning. Although *Oregon Trail II* is not designed directly for ELT, learners will find it challenging. Two or more learners may play the program independently or as a classroom supplementary activity. In either case, teachers should give learners an overview of American history. To make the best use of the program, teachers can create learning activities in both receptive and productive skills such as small group discussion. Moreover, teacher's supervision may help to promote a foreign language-learning environment among players.

A CATEGORISED LIST OF COMMERCIAL ELT SOFTWARE

Based on the four categories of CALL software discussed in section one of this chapter, the following 4 tables illustrate brief lists of ELT software with information on user group, language skills focus, target use and publisher details.

Tutorial type CALL software

Software Name	User Age	Language Skills	Language Type	Publisher
Dynamic Business English	Teenagers Adults	Integrated	ESP (Business)	DynEd Http://www.dyned.com
Dynamic English CD	Teenagers Adults	Integrated	GE	DynEd Http://www.dyned.com
Issues in English	Teenagers Adults	Listening Reading	GE	Protea Textware PO Box 49 Hurstbridge 3099 Australia Protea@mpx.com.au
Read It: Computer Science	Teenagers Adults	Reading	ESP, EAP (Computer Science)	Clarity Software Http://www.clarity.com.hk
Read It: Engineering	Teenagers Adults	Reading	ESP, EAP (Computer Science)	Clarity Software Http://www.clarity.com.hk
Rosetta Stone	Teenagers Adults	Listening Reading	GE	Fairfield Language Technologies Http://www.trstone.com
Tense Buster	Teenagers Adults	Grammar	GE	Clarity Software Http://www.clarity.com.hk
Ultimate Speed Reader	10up	Reading	GE	Davidson and Association Http://www.davd.com
Wiser English	Teenagers Adults	Listening Reading	GE	Wiser Software Http://www.wisersoftware.com

Practice / Drill type CALL software

Software Name	User Group/Age	Language Focus	Target Use	Publisher
Triple Play Plus: English	8 - Adults	Listening Speaking	GE	Syracuse Language Systems, Syracuse, NY 13210
Real English	Teenagers Adults	Listening	GE, ESP (Business)	Wiser Software http://www.wisersoftware.com

Problem Solving / Simulation

Software Name	User Group/Age	Language Focus	Target Use	Publisher
Amazon Trail 3	9 – adults	Listening Reading	GE	The learning Company http://www.learningco.com/
Maya Quest	10 – Adults	Listening Reading	GE	The learning Company http://www.learningco.com/
Odell Down Under	8 – Adults	Listening Reading	GE	The learning Company http://www.learningco.com/
Oregon Trail II	10 – Adults	Listening Reading	GE	The learning Company http://www.learningco.com/
Where in time is Carmen Sandiego	9 – Adults	Listening Reading	GE	Broderbund http://www.broderbund.com
Where in the world is Carmen Sandiego Deluxe	9 – Adults	Listening Reading	GE	Broderbund http://www.broderbund.com
Yukon trail	8 – Adults	Listening Reading	GE	The learning Company http://www.learningco.com/

Game

Software Name	User Group/Age	Language Focus	Target Use	Publisher
Crossword & More	Teenagers, Adults	Vocabulary	GE	Expert Software http://www.expertsoftware.com
Ultimate Word Attack	10up	Vocabulary	GE	Davidson and Association http://www.davd.com
Word Munchers Deluxe	8up	Vocabulary	GE	MECC http://www.mecc.com
Scrabble	10up	Vocabulary	GE	Hasbro http://www.hasbro.com

For further details on software, visit the following software publishers web sites:

The learning Company: www.learningco.com

Children's Educational Software: www.smartkids.com

Broderbund: www.broderbund.com

BLANK EVALUATION MATRIX

Directions: Tick ✓ for items that is available on the software.
The rating scale: ★ = poor, ★★ fair, ★★★ = good
Write N/A for not applicable features

Note: The rating scale may be changed to a more detailed scale if required (1-7).
The greyed out areas of the matrix do not need to be filled in.

Part I

	Tick	Rating	Tick	Rating	Tick	Rating	Tick	Rating
1. **User**								
Level:								
Beginner								
Pre-Intermediate								
Intermediate								
upper intermediate								
Advanced								
Age Group:								
Pre-school								
Children								
Teenagers								
Adults								
Purpose:								
GE								
ESP								
EAP								
Learning Mode:								
Self-study								
Course-based								
2. **CALL type**								
Tutorial								
Drill-Practice								
Simulation / Problem-solving								
Games								
3. **Objectives**								
Explicit Learning Objectives								
Match of activities to Objectives								

	Tick	Rating	Tick	Rating	Tick	Rating	Tick	Rating
4. **Language skills and components**								
Listening								
Speaking								
Reading								
Writing								
Pronunciation								
Grammar								
Vocabulary								
Others (Please specify)								
5. **Language Approach**								
Structural								
Communicative / Functional								
Other (Please Specify)								
6. **Activity Type**								
Drag & Drop								
Gap Filling								
Multiple Choice								
Matching								
Reordering Items								
True/False								
Spelling/Dictation								
Text Reconstruction								
Short Answer/Writing								
Voice Recording								
Game								
7. **Content:**								
Authenticity								
Appeal								
Accuracy								
Order of Content organization								
Cultural Appropriateness								
Appropriate Level of Difficulty								
Exercise Features:								
Appropriate number of Exercises								
Helpfulness of Exercises								
Type of English Language Use:								
British English								
American English								
Australian English								
Canadian English								

	Tick	Rating	Tick	Rating	Tick	Rating	Tick	Rating
8. **Degree of Edutainment**								
9. **Interface**								
Attractiveness								
Layout								
Pop-up Menus								
Use of Icons								
Ease of use								
10. **Help features**								
Accessibility								
Comprehensibility								
Usefulness								
Adequacy								
11. **Program Design & Performance**								
Interaction								
Clarity of Instructions/prompts								
Self-explanatory								
Possible Answer								
Program Feedback								
Feedback Type:								
Indication of correct or Incorrect response								
Hints to correct response								
Opportunities to retry								
Incorrect response Explanation								
Directions to relevant program for review								
Others (Please specify)								
Feedback Tone:								
Friendliness								
Encouragement								
12. **Use of Multimedia in the Activities**								
Supplementary Script								
Hypertext								
Graphics								
Animation								
Audio								
Video								
Match text with sound								
Appropriate Rate of Speech								

	Tick	Rating	Tick	Rating	Tick	Rating	Tick	Rating
13. **Learner's Control**								
Printing Accessibility								
Internet Accessibility								
Multi-windows accessibility								
Consistent Navigation								
Ease of Navigation								
Topic Selection								
Exercise Selection								
Option for configuring program:								
Volume Adjustment								
Audio Control Availability								
Accessibility to Answer Key								
File System Control								
14. **Teacher's Role**								
Customized Authoring Features:								
Programmable								
Templated								
On-line/Network Feedback								
Task Consultation								
15. **Assessment**								
Quizzes / Tests								
Task Score								
Record Keeping & Progress Report								
16. **Supplementary documentation**:								
Manual								
Textbook								
Student's Work book								
Teacher's Handbook								
Answer Keys								
17. **Platform**								
DOS								
Windows 3.1								
Windows 95/98								
Windows 2000								
Windows NT								
Macintosh								

	Tick	Rating	Tick	Rating	Tick	Rating	Tick	Rating
18. **Technical Consideration**								
Ease of Installation								
Program Sturdiness								
Text Quality								
Graphic quality								
Sound quality								
Loading Speed								
Microphone								
Technical Support:								
Manual								
Online Help								
Phone Contact								

Part II Software Information

Version				
Publisher				
Year of Release				
Cost				
Hardware Requirement				
Memory (Ram)				
Hard Disk Space				
CD Rom / DVD Rom speed				

5 A guide to authoring customized software

Snea Thinsan

INTRODUCTION

This chapter deals with concepts and practically useful information about authoring customized software. The aims are to provide university language teachers in Thailand, particularly those with little background knowledge and limited skill in using computers and the Internet, with crucial information on authoring customized software as well as to encourage and enable them to start instructional contact with their students via computers.

Why authoring?

The following are some of the very important reasons why teachers in Thailand should author or create their own software or instructional materials for their classroom use:

- Commercial software is often produced overseas, may be both expensive and inappropriate for use in the Thai context.
- Teacher-tailored instructional materials can be highly responsive to students' needs, interests, background knowledge, skills, and learning styles because teachers know their students the best.
- Customized authoring tools are becoming incredibly easy to use; even those without any knowledge about programming can author with ease.
- Essentially there are gaps between the content authority and the technicians. These gaps could unnecessarily result in a waste of time and poor quality of product unless time and communication are well managed.
- The more teachers get involved in technical work, the more they become creative and enthusiastic in manipulating the available technological tools and the more students can benefit from it.

Definitions

In this chapter, I will be using the following terms: *authoring; authoring tools; software; customized software; Intranet; Hybrid; and some others which are not defined within this chapter.* Please consult the glossary if any are unfamiliar to you.

Key approaches to delivery of customized software

When customized software is to be produced, the author should also consider how the product will be delivered so that the appropriate authoring tool can be selected.

Customized software can be delivered in four ways:

- *CD-ROM based delivery:* The delivery of customized software via CD-ROMs. CD-ROMs are inserted in a stand-alone PC and the content retrieved.
- *Web-based delivery:* The delivery of customized software via the internet. People from all over the world who are connected can have access to it, unless you password protect it.
- *Intranet:* The delivery of customized software whose content may be in both CD-ROM and Web-based formats. The Web sites used within the Intranet are not linked with the outside world. The content can be accessed within the Intranet, which is a group of computers networked together and serviced by a server. The Intranet allows users within the network to share resources, coordinated by the server.
- *Hybrid:* The delivery of customized software in both CD-ROM and Web-based formats conducted via both Intranet and internet at the same time. This approach of delivery is becoming popular because it helps solve the problem of speed when bandwidth-heavy resources are to be used. Since it is very slow to load them from a remote end in the internet, these resources are, instead, stored in the server for local users. At the same time, students or local users can access other Web sites on the internet for other resources and for text-based instructions.

TASKS INVOLVED IN AUTHORING

It is totally impossible to offer a sound discussion on tasks involved in authoring within the limited space allowed here, simply because there are several processes involved, each of which deserves a more thoughtful consideration and discussion. This chapter will only briefly outline a general overview of the basic tasks involved in authoring and examine them in terms of *programmable authoring and templated authoring.*

The objective is to point out how easy it can be for a teacher to become an author.

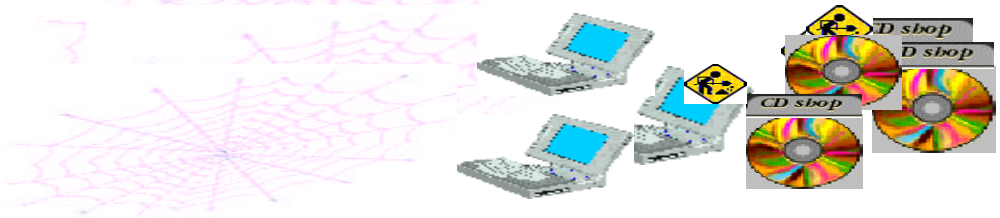
Programmable authoring tools and templated authoring tools

Programmable authoring tools:

Authoring tools which allow authors to customize and manipulate them the way they desire, by writing a script for them to work, or by programming them. A great benefit of using these tools is that it allows teacher-authors to manipulate the hardware and software as much as they desire. Yet, it is usually too difficult and often inconvenient for most teachers to learn and do all by themselves.

Templated authoring tools:

Authoring tools that prepare the ready-made templates, widgets, or wizards for the authors. The authors only have to choose the templates they prefer and key in the information. The selected authoring tool does all the rest of the job. These authoring tools may allow insertion of multimedia files. Among other uses, they can mark, give instructive feedback, and report results to both students and teachers directly, immediately, or via e-mail. Despite the fact that the templates may not be responsive to all instructional needs, they are obviously handy, time-saving, and highly recommended for all interested teachers.



How much can you do?

Tasks	Programmable Authoring Tools	Templated Authoring Tools
1. Seek funding	Yes	**No**/Yes
2. Form a team: content/ technical/support	Yes	**No**/Yes
3. Prepare content – most important!	Yes	Yes
4. Identify multimedia types	No/Yes	No/Yes
5. Prepare scripts for multimedia materials	No/Yes	No/Yes
6. Produce or select available multimedia files	No/Yes	No/Yes
7. Plan and write scripts (programming)	Yes	**No**
8. Produce and publicize	Yes	Yes
9. Evaluate and edit	Yes	Yes

- **Seek funding:** If you decide to use programmable tools, it usually means that you are planning a big project. You probably need to seek funds to run it. On the other hand, if you author a simple, but pedagogically useful product, you do not usually have to worry too much about money. You need only to use your head and the services that are freely available.
- **Form a team:** If you plan to produce a complicated, programmed piece of software, you usually need a team: content authors, audio and video technicians, graphic designers, and even a typist. But for authoring with templated software, you can pair up with a colleague or even do it all by yourself, alone. However, it is always useful to seek a second opinion.
- **Prepare content:** Content is probably the most important element in authoring. It involves a lot of work and factors for consideration, ranging from analyzing the needs, setting the objectives, identifying the content, selecting the types of media, etc.
- **Identify the types of media:** While planning the content for each objective, the right type(s) of media must be selected in order to best meet the desired outcome. There must be a sensible rationale for using

the media, which usually requires a lot of money, effort, and time to produce.

- **Prepare scripts for multimedia materials:** To make the media best serve your objectives, you need to write scripts yourself or have an expert decide and plan what the multimedia materials should contain and perform.
- **Produce or select available multimedia files:** Producing multimedia resources for your courseware is a painstaking process and requires technical support or expertise. With teachers involved in the production team, it is easier to tailor the software and troubleshoot problems as they emerge.
- **Plan and write scripts (programming):** To have all the content and multimedia files work as you wish, you need to program them. This process could be complicated if you desire to create something sophisticated, although simple programming could work as well to serve your basic purposes.
- **Produce and publish:** This is actually to put all the files or content you have prepared into a source or sources and make them work as you have programmed. Then, you are ready to let people see or use your product.
- **Evaluate and edit:** It is wise to have your product evaluated by various people, especially before formally publishing it. Comments and suggestions from different people will be very useful for the improvement. Evaluation should also be done after the publication so that feedback can be used for future projects.

Included within the above work are a number of other important tasks, such as copyright clearance, studio set up, logistic work, etc. Details can be found in various books and Web sites. Please refer to the Bibliography.

RECOMMENDED, POPULAR, EASY-TO-AUTHOR, AVAILABLE TOOLS

Programmable authoring tools

(Recommended for authors with an interest or at least some knowledge of programming)

To author using programmable authoring tools, at least some basic knowledge about programming is necessary. If the tasks are difficult, or complicated, sophisticated programming is inevitably required.

This section will briefly introduce a few tools commonly used in Thailand.

ToolBook

Aspects	Descriptions
1. System requirements	Windows 95, 98, or NT
2. Interesting features/ strengths	• Programming language very powerful • Ability to communicate with the Internet—can be converted to HTML • Easy to create files for distribution to floppy disks or CD-ROM • Has widgets for various types of quizzes: MPC, T/F, fill-in-the-blank, matching, and order text • Great tutorials (CD/Internet)—easy to learn
3. Limitations/ weaknesses	• Difficult to master its programming and still expensive • Not as flexible for educational uses, but becoming more tailored
4. Resources	Try the following web sites: http://tcc-pub.com/res.htm http://tcc-pub.com/tbii70/tb70res.htm

Macromedia Authorware

Aspects	Descriptions
1. System requirements	Windows 95, 98, or NT
2. Interesting features	Built in record keeping system OK with all kinds of multimedia, though not very impressive Easy to tailor for various purposes See more at http://www.macromedia.com/software/authorware/productinfo/features/index_whatsnew.fhtml
3. Limitations/ Weaknesses	Expensive and rather difficult or confusing to program No direct looping (repeat) procedure (inflexibility) Some features, e.g. dragging objects, not functional in network environment-(too slow) Flowchart paradigm not convenient for repurposing course material
5. Resources	http://www.e-media.nl/aware/ or http://www.macromedia.com/learning/ or http://www.goto.com/d/search/p/befree/?Promo=befree00014631570331490822&Keywords=Authorware&search.x=17&search.y=14

Macromedia Director

Aspects	Descriptions
1. System requirements	Windows 95, 98, or NT
2. Interesting features	• Popular for online books • Good addition for Authorware and good for animation • The Director 7 Shockwave Internet Studio is the standard for creating and delivering powerful multimedia for the Internet, CD-ROMs, and DVD-ROMs. You can combine graphics, sound, animation, text, and video. • Easy to create, import, animate, and control media. • Can create Shockwave content seen on many Web sites. Shockwave Player is the Internet's high-speed, low-bandwidth engine for multimedia. Director's authoring environment is Internet-optimized and supports Java.
3. Limitations/ Weaknesses	• Not very good with interaction or for text • Need time to learn it. • Not originally designed for educational purpose.
4. Resources	http://www.macromedia.com/software/director/ or http://www.funmark.com/flash_programming.htm (for programmers)

The above programmable authoring packages can be extremely useful and responsive to all the teachers' needs. However, to be able to fully manipulate them, you may need to spend a considerable amount of time and effort. The good news is that the companies producing these packages have tried to make them very user-friendly and simple enough to use for anyone with word processing skills and some basic knowledge about computers and file systems.. Moreover, these tools are being redesigned for internet publishing. You are strongly encouraged to keep your eyes on them and try them out.

Templated authoring tools

(Recommended for teachers with very little or no programming experience)

The templated authoring tools (described below) are all available on the Web. You may either download them for use or create instructional materials and post them to servers which offer free services. They are extremely easy for teachers to use. You are strongly encouraged to try them, if you have not already.

Five very good, popular authoring tools are described here in more detail, including how they can be accessed and used. A selection of other available authoring tools is offered at the end.

Note: Wiser Educator can be categorized in this group, the details of which are presented in the following chapter.

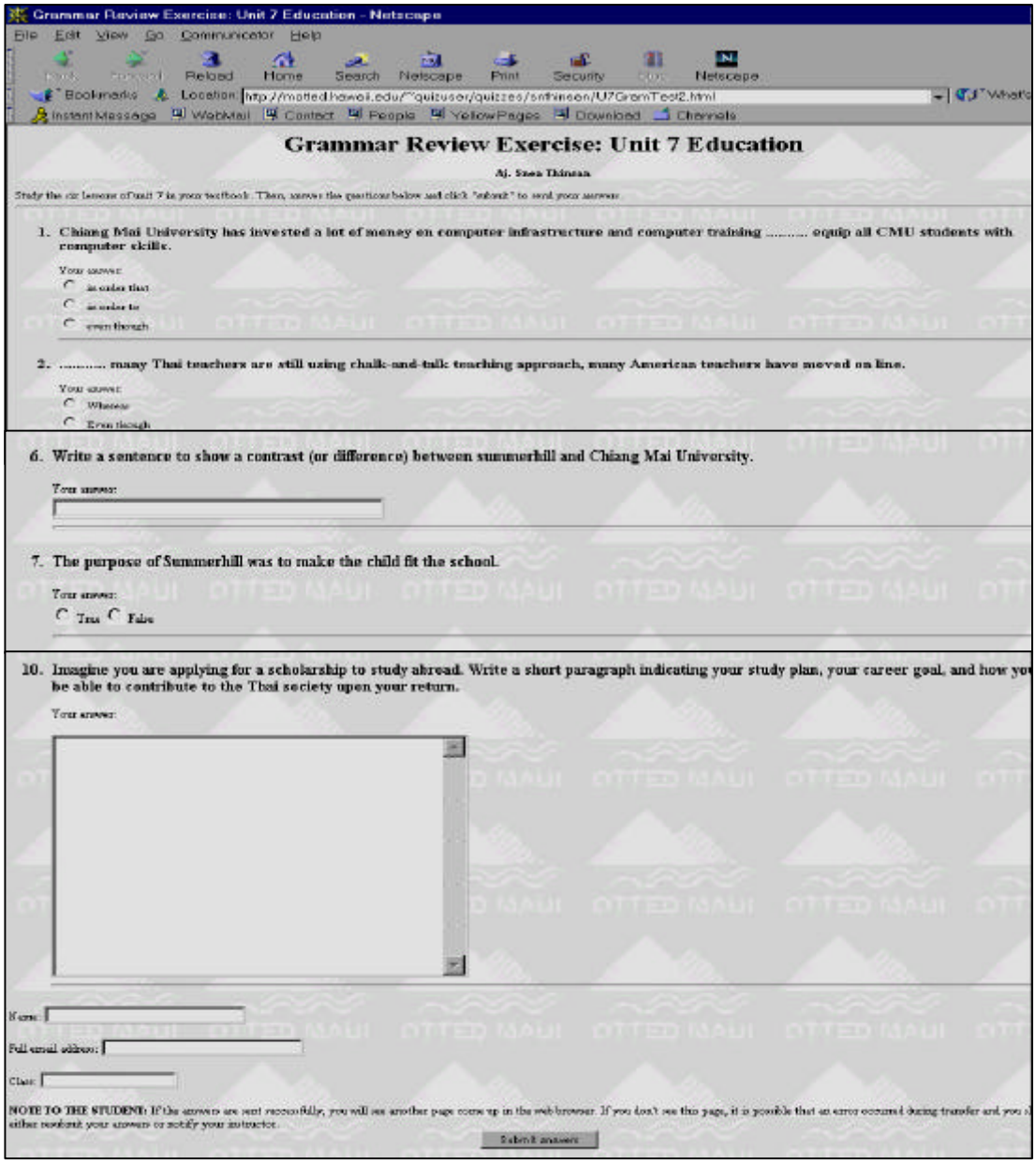
Quiz Center

The QuizCenter of the University of Hawaii offers a collection of separate quiz tools, which provide a variety of academically interesting services.

Aspects	Descriptions
System requirements	Windows 95, 98, or NT
Interesting features	• **Automatic quiz generation:** Without any knowledge of the HTML web page language, teachers can make on-line quizzes simply by typing in your input to generate a generic quiz file and answer key which are stored on the server at the University of Hawaii. With the addition of inline images and hypertext links, the quiz can be its own self-contained learning module**.** • **Privatized quizzes:** *Restrict-a-Quiz* provides the capability to restrict quiz viewership to specific individuals using a password protection scheme. The only ones who can take the quizzes are those to whom teachers release the passwords. • **Quiz file management:** Quiz files can be edited after they are created, and deleted once they are no longer needed. Teachers can do all this over the Web. • **Immediate quiz correction**: After the student has submitted his/her answers, *CorrectQuiz* checks the answers against the answer key, determines which answers are correct, and tallies the total score. Then, within seconds, it produces a page that shows the results and displays the correct answers, if the teacher chooses. Great for practice tests! • **Test taking, hi-tech and easy:** *QuizMail* takes the answers submitted from inside the quiz, deciphers or decodes, sorts, marks, and then mails it directly to the teacher's email address. It saves time and saves paper. Ideal for "open-book" or "take-home" exams. • **Grading, simplified:** *CorrectMail* performs on-the-fly quiz correction and then mails the results to the teacher instead of displaying them for the student. It reduces the time required for grading by eliminating the need to check each question against an external answer key.
How to apply	Step One: Type the URL address: http://www.motted.hawaii.edu/ Step Two: Click on *QuizCenter Online Service* Step Three: Click on *Who may apply?* Then, click on *Apply now*. Step Four: Fill out the form and click on *Submit information*. Wait for reply from the center. If they decide to give you permission to create the quizzes to put on their server, they will give you the URL addresses for your students to take the tests and for you to edit your tests.
Resources and Contacts	• http://www.motted.hawaii.edu/ • e-mail: snthinsan@yahoo.com

Quiz Center: continued

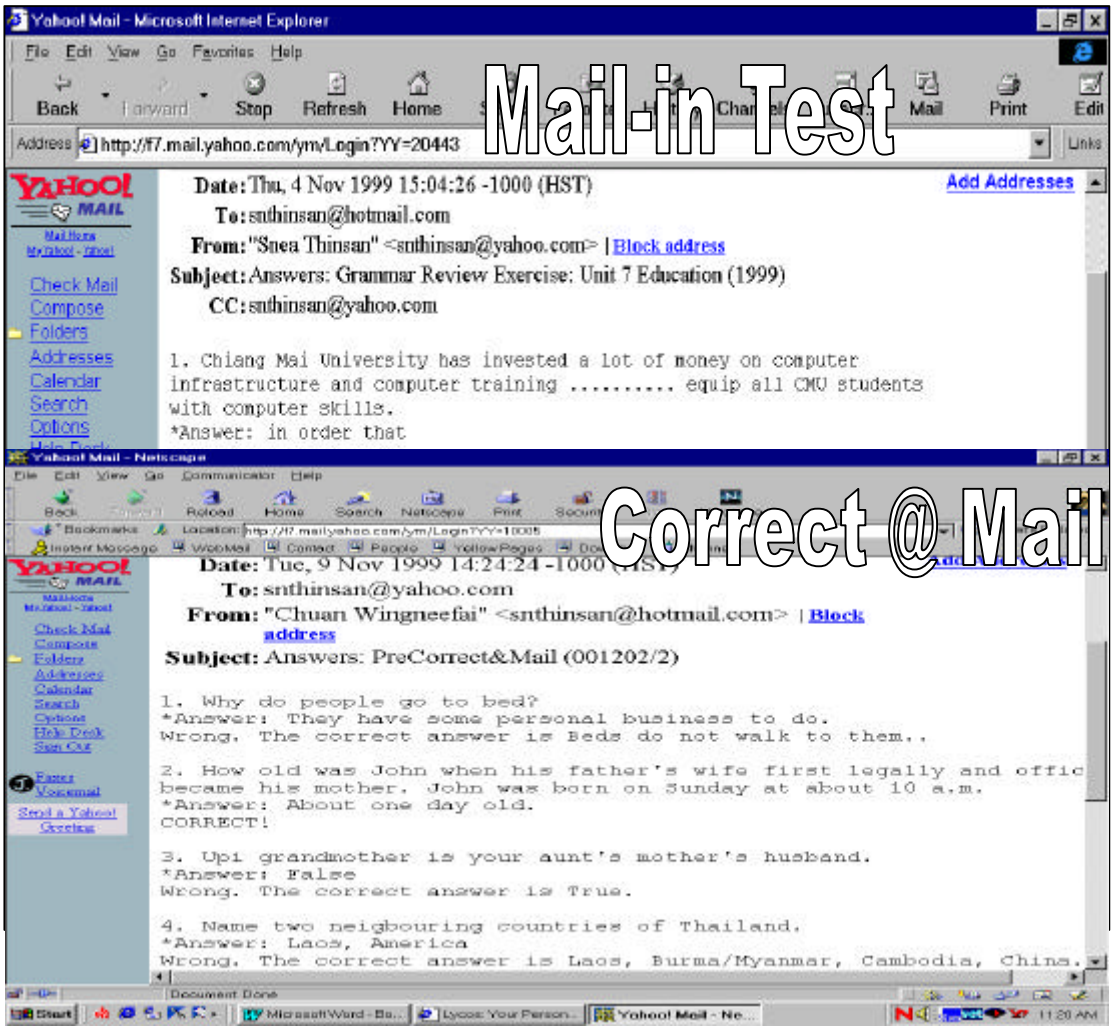
Aspects	Descriptions	
It is easy to create a test at Quiz Center	Step One:	Type the URL: http://www.motted.hawaii.edu/. Then, simply click on QuizCenter Login (for account holders).
	Step Two:	Fill in : User ID: _____ and Password: _____, which have been assigned to you. Then, click *Submit***.** You will enter QuizCenter Main Menu**.**
	Step Three:	Click on the radio button next to create a new quiz. Then click on *Make selection*. Now you are at QUIZMAKER 2.0 Enter the quiz information page.
	Step Four:	Choose the options or fill in the blanks with the details of your quiz. The screen will walk you through. At the end, *click make quiz file***,** and your quiz will be available right away on the internet.



(Above, is part of a sample test I have created)

The preceeding quiz sample is a simple one without links to text files, or any multimedia files, but this is also possible simply by clicking and importing, or adding links to what you want your students to see or read before, after, or during the test. Use your imagination and creativity to make these easy-to-use, versatile, clever tools work best for your students. Now, what happens after the students have submitted their answers?

If you choose, the student's answers can be mailed to you and to that student's e-mail address. Here snthinsan@yahoo.com/ is used as a student's address.

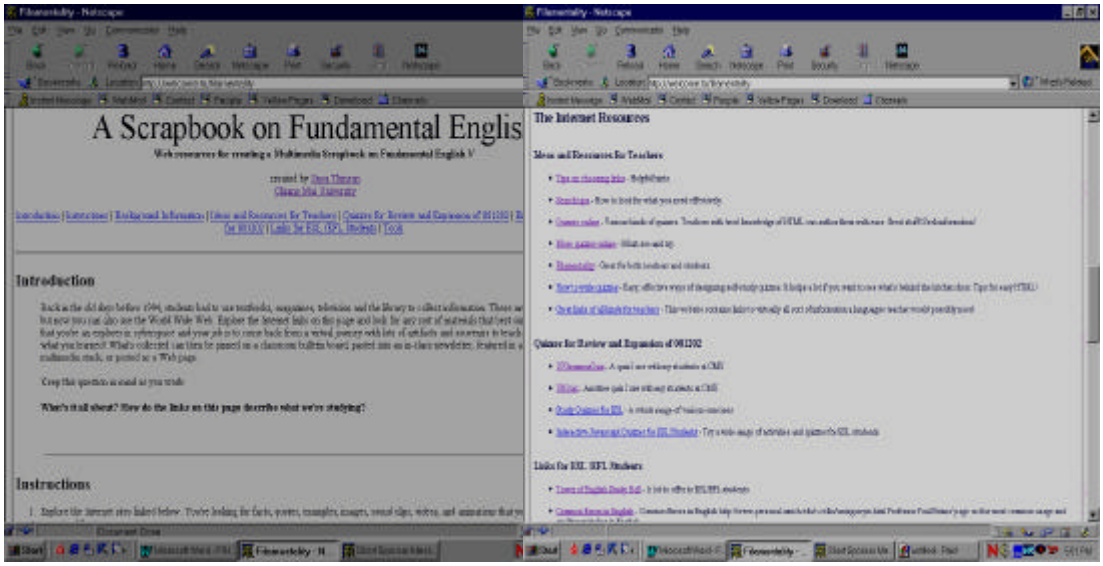


You can make use of this e-mail message in several ways. For example, you can correct the student's mistakes for 'short answer' and 'essay' types of questions, simply by adding comments or correction in the above message and forward it to the student. You can also copy it and paste in a Microsoft Word file where you can use a lot of utilities, such as spelling and grammar check, thesaurus, etc.

Filamentality: Web-based learning activity pages

Filamentality, 'a fill-in-the-blank interactive web site'. It guides you through picking a topic, search the web, gathering good internet sites, and turning web resources into activities for your students.

Aspects	Descriptions
System requirements	• Windows 95, 98, or NT • A copy of Netscape Navigator or Microsoft Internet Explorer 3.+ to view the files.
Types of Educational Utilities	• Tutorials/ Coursesite / Enforcement • Evaluation (if linked to a quiz Web page)
Interesting features	• Knowledge of HTML, and web technologies is not necessary. • It can be tailored to target a specific kind of learning. • You will get your own Web page on the Internet right away.
Resources and Contacts	http://welcome.to/filamentality
How to apply	Step One: Type URL http://welcome.to/filamentality. Then, click on *"New."* Step Two: Fill in the information about yourself and the course and click on *"Spin this thing"* at the end of the page. Step Three: You will see a page which summarizes the information you have just typed in. Step Four: Start working at the bottom of the page. You only have to type or click. The tutorials provided will walk you through if you are lost. Good luck and have fun.



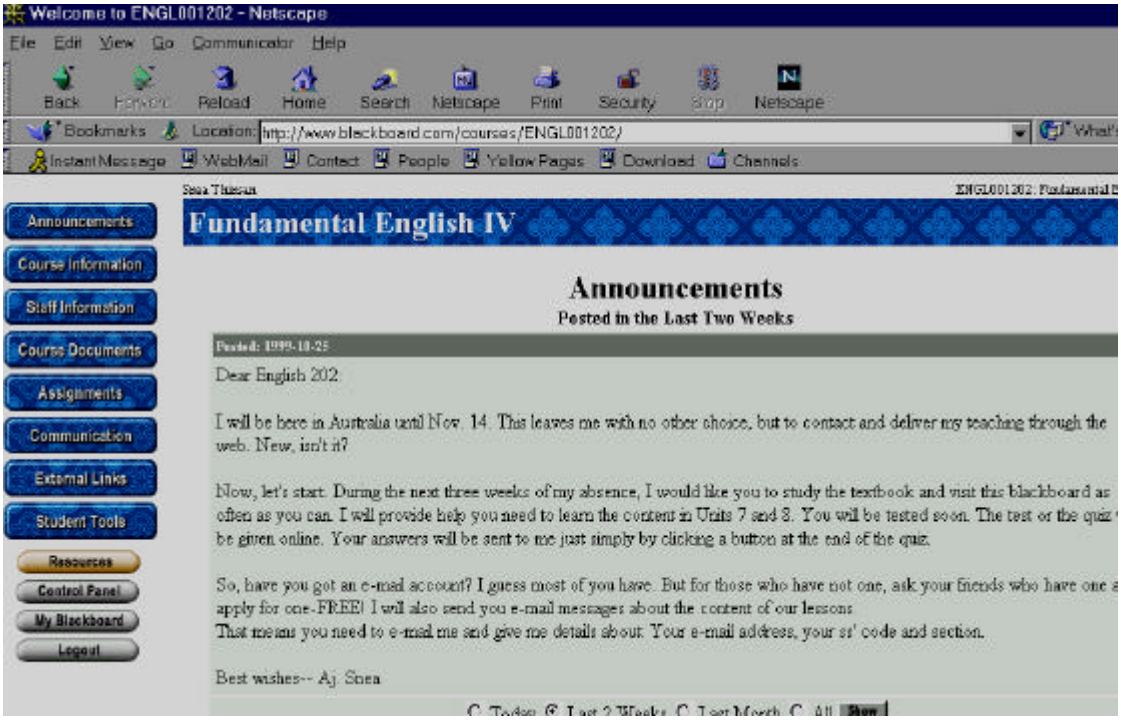
By simply clicking and typing in the blanks, you can have your own course site with links to multimedia resources, classroom materials, other web sites, and the exams or exercises you have prepared for them. The scrapbook, as it is called, may look like this, plain, but containing a lot of useful links.

Blackboard.com

A free *course web site. You can access the web site for the first time and , without having to wait for permission, you can post everything about the course you are teaching right away. Great services. Many teachers around the world are having their coursesites at Blackboard.com*

Aspects	Descriptions
System requirements	• Windows 95, 98, or NT • A copy of Netscape Navigator or Microsoft Internet Explorer 3.+ to view the files.
Instructional Utilities	• Tutorials/ Coursesite / Enforcement / Evaluation
Interesting features	• The place for teachers to be endlessly creative.
How to start and make it work for yourself	***Step One:*** Type the URL: http://www.blackboard.com ***Step Two:*** Click on "*Create Course Site."* ***Step Three:*** Type in the information about your course and click on *"Continue"* ***Step Four:*** More information about the course and click on *"Continue"* ***Step Five:*** More information about the course and click on *"Continue"* ***Step Six:*** View your course information. Click on "*View New Course*" to view your course. Now you get what you can work with. Enjoy exploring.
Resources and Contacts	http://www.blackboard.com e-mail: jsimmons@blackboard.com

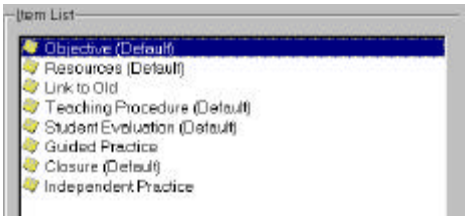
You can have your own coursesite like the sample below with a lot more of useful elements for your students, again just by simply typing in and clicking. Just do it!



Hot Potatoes: Half-Baked Software

Aspects	Descriptions
System requirements	• Windows 95, 98, or NT • A copy of Netscape Navigator or Microsoft Internet Explorer 3.+ to view.
Instructional Utilities	• Tutorials/ Enforcement/ • Evaluation (both formative and summative)
Interesting features	• Hot Potatoes offers exercise templates: multiple-choice, fill-in the gap, short-answer, matching, jumbled-sentence, and even crossword. • It can help you create interactive teaching exercises for the Web, a stand-alone machine, a network, or a CD-ROM. • Graphics or HTML links can be included. • Test-takers are given immediate feedback on the correctness of an answer and are given hints and clue. • You do not need to know HTML or JavaScript to handle it. • The source files can be edited, and the templates can be adjusted. • It runs on both Windows and Macintosh platforms.
How to get started	• Download the program (software) free. • Set up or install *Hot Potatoes* in your Hard Disk. • Create your preferred quizzes on paper. **Steps involved in authoring:** • Open *Hot Potatoes* from *program files*. • Click on the potato labeled with the type of quiz you prefer. • Fill in the blanks with the test you have prepared on paper. The program will guide you through, even to the stage of publishing your quiz on the Web.) ***If necessary, you can use 'Tutorial' provided online, or consult the 'Help file,' or press F1 to get help at any time.***
Download from	http://web.uvic.ca/hrd/halfbaked
Resources and Contacts	http://web.uvic.ca/hrd/halfbaked hotpot@uvic.ca
Installation Information	Hot Potatoes is distributed as a zip file named 'hotpot30.zip. Simply copy the file into an empty directory and unzip it using WinZip or any other zip file utility. The setup files will then be extracted. Then, run "setup.exe" to install the suite. You can safely uninstall it by using the "Remove Program" utility in the Windows Control Panel. Moreover, the help file includes full details on all the files installed by the suite, along with other changes made by the installation program.

Lesson Manager Professional: ISD Software Design



Lesson Manager helps you create & edit lesson plans, record daily agendas, do class preparation, and view teacher's notes.

Aspects	Descriptions
System requirements	• Windows 95, 98, or NT • A copy of Netscape Navigator or Microsoft Internet Explorer 3.+ to view the files.
Types of Instructional Utilities	• Tutorials/ Coursesite • Enforcement and evaluation (if linked to a quiz Web page).
Interesting features	• Each lesson offers features: listing objectives, teacher resources, procedures, closure, etc. • You can use standard word-processing utilities: spell-check, styles, fonts, and custom formatting. • It allows links to files or internet pages with simple clicking. • Lessons can be dragged and dropped under each unit.
How to get started	• Type URL http://hotfiles.lycos.com/cgi-bin/texis/swlib/lycos/info.html?fcode=000O1P • Download the program. Open it by clicking on the icon 'Lesson32.exe' and it will walk you through.
Download from	http://hotfiles.lycos.com/cgi-bin/texis/swlib/lycos/info.html?fcode=000O1P
Resources and Contacts	http://hotfiles.lycos.com/cgi-bin/texis/swlib/lycos/info.html?fcode=000O1P

Other available authoring tools

1	**Easy Test (1.1)**
Rating	**5*****
System requirements	Windows 95, 98, or NT
Descriptions	• It creates multimedia computer-based tests (multimedia questions) • It allows a question bank of up to 5000 questions; It then presents questions from this bank, either randomly or sequentially. • Each question can contain additional information in the form of text, graphics, audio or video, either before or after a question is answered. • HyperText links can be included • The student's correct and incorrect answers are recorded, and test results can be saved to disk or printed. Results can even be encrypted, allowing it to be used for 'distance education' assessment.
Price	Shareware: Free to try, $25 if you decide to keep it.
Download free from	http://hotfiles.lycos.com/cgi-bin/texis/swlib/lycos/info.html?fcode=00Y16

2	**PC-CAI: TexaSoft (2.11)**
Rating	**5*******
System requirements	DOS 3.3
Descriptions	• It's a DOS-only program for developing interactive tutorials, tests, and demonstrations. • It lets you create an interactive script in PC-CAI by using either the computer-assisted instruction (CAI) language or the CAI-Create program, which provides templates for creating question-and-answer lessons. • You can track student responses, save test information, and display grades at the end of the test. • You can also add graphics in the PCX format, and audio in the Sound Blaster Voice and Text to Speech format.
Price	Shareware: Free to try, $69 if you decide to keep it.
Download free from	http://hotfiles.lycos.com/cgi-bin/texis/swib/lycos/info.html?fcode=00007F

3	**IES Test Maker: Intelligent Educational Software (2.2)**
Rating	**5*******
System requirements	VGA and DOS 3.3
Descriptions	• It helps you create tests which can incorporate voice, music, graphics, and hypertext. • It allows up to 250 multiple-choice questions, with up to six choices per question. • The tutorial provides step-by-step instructions that show you how to create a test file. • Test results can be saved to a file, printed, or displayed on the screen. • The program includes TestPlay, which allows students to take the created test. IES TestMaker is so multifaceted that it may be limited only by your imagination.
Price	Shareware: Free to try, $39.50 if you decide to keep it.
Download free from	http://hotfiles.lycos.com/cgi-bin/texis/swlib/lycos/info.html?fcode=00007A

4	**WebQuiz Writer HTML: Eon Communication (4.0.12)**
Rating	**5*******
System requirements	Windows 95, 98, or NT
Descriptions	• It's a teaching aid for creating practice quizzes to be posted on the Internet. • True/false, multiple-choice, and multiple-answer formats are provided, with up to five answers per question. • You can add images or hyperlinks if you're willing to learn some HTML tags. A single HTML file is generated to display your quiz ready for posting on the Web server. • You can appear like a Web pro, even if you know nothing about HTML. • After users complete the quiz online, they can have it automatically graded, with answers and explanations offered. • WebQuiz Writer HTML features ODBC-compliant database support, an on-the-fly spelling checker, and printer support.
Price	Shareware: Free to try, $39.95 if you decide to keep it.
Download free from	http://hotfiles.lycos.com/cgi-bin/texis/swlib/lycos/info.html?fcode=000NM1

5	**Class Mate Grading Tools for Windows (4.1)**
Rating	**5*******
System requirements	Window 3.1
Descriptions	• It's a grading package for teachers at all levels, which automates many time-consuming tasks involved in recording and maintaining students' grades and records and determining class grade averages. • Multiple subjects, user-defined grade categories, and various time periods within the class dates are also supported. • You can create a variety of detailed reports, including missing assignments, progress reports, attendance records, and class grade distribution. • It's easy to use.
Price	Shareware: Free to try, $29.95 if you decide to keep it.
Download free from	http://hotfiles.lycos.com/cgi-bin/texis/swlib/lycos/info.html?fcode=000EU2

6	**Digital Homework: Robert S Smith (1.10)**
Rating	**5*****
System requirements	Windows 95
Descriptions	• It helps students learn through a variety of computer-based examinations. • It allows educators to create a host of tests using multiple-choice, matching, true/false, fill-in-the-blank, or essay question formats. • You can use Digital Homework for simple homework assignments or to create a series of full-blown computer-based training (CBT) projects. • Each test can be linked to Web pages, multimedia files, or other references. • A simple click on the More Information button takes the student to the Web they specify, for example, where the answer to the question is explained or additional information is provided. • A Show Picture button lets the student see additional, graphical data about the questions.
Price	Shareware: Free to try, $10 if you decide to keep it.
Download free from	http://hotfiles.lycos.com/cgi-bin/texis/swlib/lycos/info.html?fcode=00007F

7	**Test Maestro: R&R EdWare (1.01)**
Rating	5*****
System requirements	Windows 95
Descriptions	It's designed to meet the requirements of professional educators. It offers a wealth of features to allow you to create multiple test versions, printed answer keys, answer sheets, test booklets, and more. A built-in tutorial helps get you started, and extensive online help is available to answer any questions. It allows you to set up the test formats to suit your preferences. Select from a variety of test formats, such as true/false, multiple choice, essay, and several more. It's easy to set up and offers a systematic and logical approach to building tests. This is one program any teacher will want to have.
Price	Shareware: Free to try, $35 if you decide to keep it.
Download free from	http://hotfiles.lycos.com/cgi-bin/texis/swlib/lycos/info.html?fcode=000EFA

8	**ARTS A-Frame Developer's Edition: Round Table Solutions P/L**
Rating	**4******
System requirements	Microsoft Internet Explorer 3.02 or later and Windows 95, 98, or NT
Descriptions	• It's a comprehensive, easy-to-use program designed to create multimedia tests or tutorials for students or adults. • You can create short-answer, long-answer, or multiple-choice questions with up to 26 answers. • You can attach sounds, video, or graphics or link any OLE objects to the question or answer and you can change background and text colors, font styles, the number of questions, rotation order, etc. • Reports provide feedback for both students and teachers via e-mail. • Import/export options enable easy data sharing between educators or trainers. • Detailed help and example quizzes are included. • The evaluation version allows you to create tests but lets you answer only the first four questions of a test until registered.
Price	Shareware: Free, but you need to register first to use the test.
Download free from	http://hotfiles.lycos.com/cgi-bin/texis/swlib/lycos/info.html?fcode=00101T

9	**Creat A Quiz: Philip Kapusta (4.32a)**
Rating	**5*******
System requirements	Windows 3.1
Descriptions	• It allows multiple-choice, fill-in-the-blank, or combination tests. • Questions can include WAV and AVI files along with bitmap graphics . • It allows options of printing it (with/without the answers) or test-taking on PC. • Tests can be configured with a time limit or minimum number of questions before the student can exit. • Student's performance is saved and a re-teach summary shows the student errors and correct answers for each question missed. • The tests can be password-protected and encrypted to prevent tampering.
Price	Shareware: Free to try, $59.95 if you decide to keep it.
Download free from	http://hotfiles.lycos.com/cgi-bin/texis/swlib/lycos/info.html?fcode=000ZCJ

10	Markin32: Creative Technology (MicroDesign) Ltd (1.4.2)
Rating	**4****
System requirements	Windows 95, 98, or NT
Descriptions	• Any student text in an electronic format (RTF or text files) can be loaded, notated, marked, and graded using a customized set of 32 buttons easily configured to your grading style; 28 are used for error correction, and four are available for positive annotations. • Overall feedback or lengthier comments can be inserted footnote-style. • It offers a bookmark option and tools for converting or replacing MAC characters, stripping email returns, counting words, and viewing error statistics. • Completed papers can be exported to a Web page format, completed with hyperlinks to annotations and feedback. • The evaluation version will work on only small texts of approximately 164 words until registered.
Price	Shareware: Free to try, 18 UK Pounds if you decide to keep it.
Download free from	http://hotfiles.lycos.com/cgi-bin/texis/swlib/lycos/info.html?fcode=000XJA

TIPS FOR PROSPECTIVE TEACHER-AUTHORS

"Just Do It!"

It is not a matter of whether we should use the computer as part of our teaching; we teachers *must* learn how to exploit it and, in the near future, manipulate it to its and our full potential. So, do not hesitate. Do something about it! Remember that the tasks have been greatly simplified for you to the extent that you don't need any background knowledge in programming to successfully create your own courseware or instructional materials.

Educational values

When it comes to CALL, people usually hold that computer literacy, multimedia production, and programming are the important and daunting tasks and they are scared of getting into them. As a matter of fact, it is the content, of which teachers are specialists, that matters the most. Just think about bad wine in a brand name bottle. Thus, remember that teachers are the major ingredients for developing valuable courseware. They need you out there.

Cost-effectiveness

The buzz word "*multimedia*" has become the core part of many people's decision on what to include in their courseware. It is wise, however, always to ask yourself

which multimedia type best serves your teaching objectives, is cheap, is technically appropriate, and is easy to produce.

Do what you can!

A big project involves a terribly painstaking processes, which could easily discourage people from considering authoring courseware. But remember, good courseware does not have to be difficult to author. As long as it serves your objectives, a simple unit of instructional material is perfect. We are not talking about using computers to replace teachers.

Team-building and sharing: Staff development

Although it is better to start by authoring something simple but pedagogically useful, you should also consider expanding your experience.

When you carry out a bigger project where you have to work with people from other fields of expertise, such as technicians and programmers, you will learn a lot and others will learn something from you. This sharing of experience will boost staff development opportunities in an informal and creative way.

A final remark

Increasingly, there have been discussions and experiments on using online instructional materials of different forms, such as a complete *coursesite*, where all needed materials, tutorials and enforcement, exercises or quizzes, and exams are provided online. Teachers with little knowledge and skills in computers have been provided with an authoring environment which requires no programming skills, thus enabling them to create any of the above materials simply by clicking or typing in information. Please refer to the sources listed in the bibliography if you are interested in detailed discussions of various aspects related to online delivery of lessons.

6 Authoring with *Wiser Educator*

Sasi Jungsatitkul

INTRODUCTION

This booklet is based on my experience authoring ESP material with *WISER EDUCATOR.* It will cover the following topics: the authoring features of *WISER*, the pre-authoring preparation, and the authoring process. The booklet is intended to be a step-by-step manual for ELT teachers who have not had much experience with authoring software. Thus, the main focus will be on the last part of the booklet, which is the authoring process.

The authoring program that was used in producing the sample units of ESP material was *WISER EDUCATOR* Version 2.0 for a number of reasons. Firstly, the TASEAP institutions have been granted the permission to freely use the program. Secondly, it is the same software that was used for *Real English* and *Wiser English* which were distributed earlier. Thus, it is hoped that the lecturers and the students at these institutions are already familiar with the program. Lastly, being a template, the program is very user-friendly in that authoring with it is a simple operation.

Note: *WISER EDUCATOR* is authoring software for CALL materials. *Real English* and *Wiser English* are CALL materials that were authored with *WISER EDUCATOR*.

WISER EDUCATOR AUTHORING FEATURES

Before we start the authoring process, let's get to know some important authoring features of the program

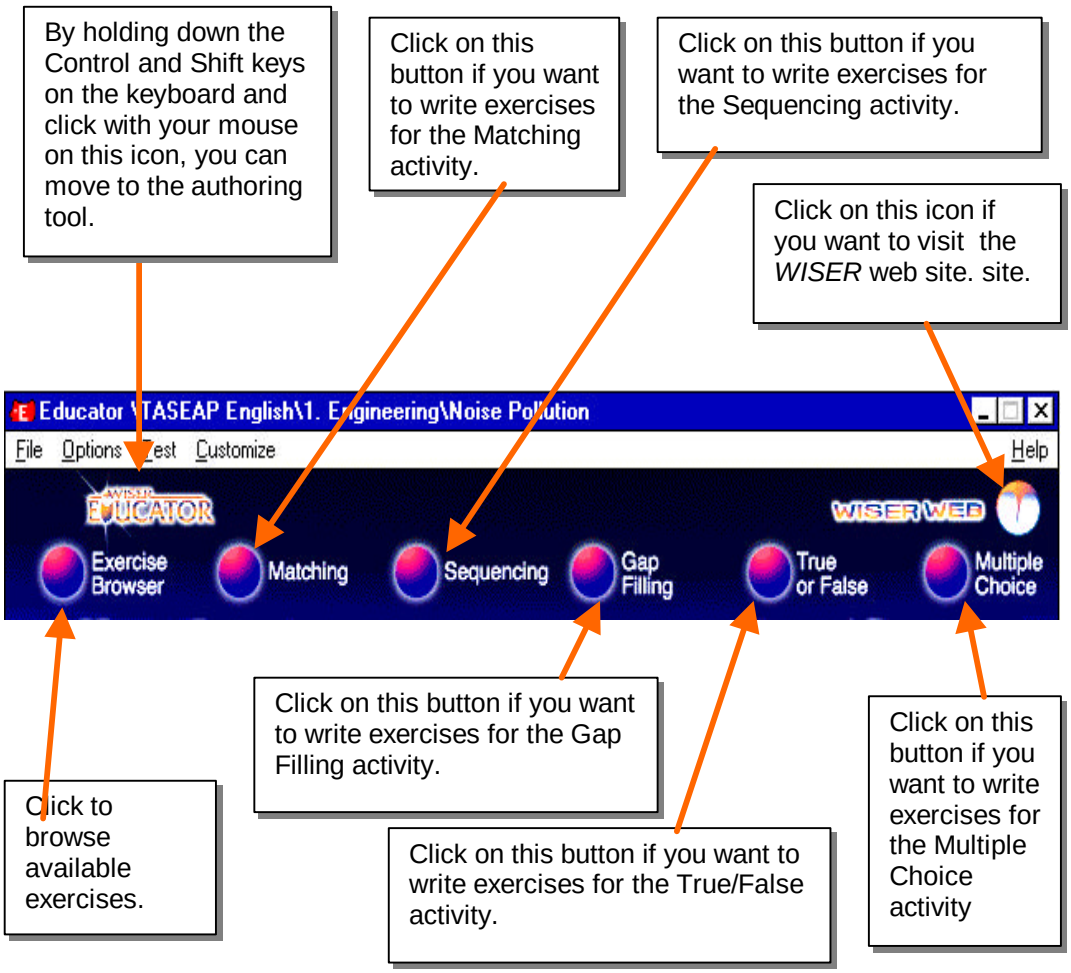
Components of Wiser Educator

WISER EDUCATOR consists of the user interface and the authoring tool. The main focus of this booklet is the authoring tool since the booklet is intended to be a guideline for teachers who are interested in authoring their own CALL (Computer Assisted Language Learning) materials. Those who are interested in

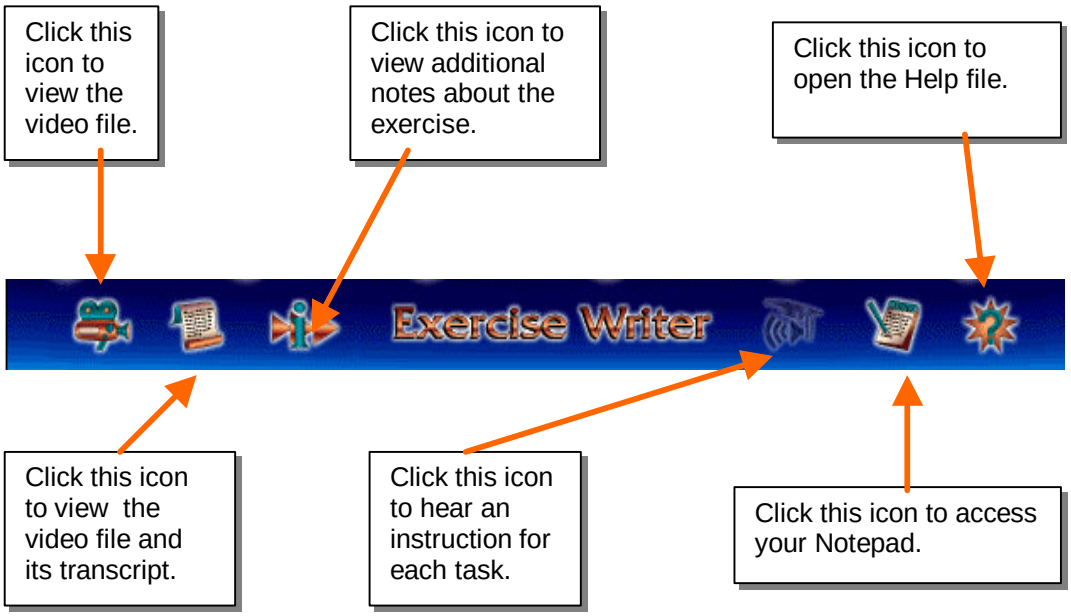
the user interface are recommended to refer to *WISER EDUCATOR* User Manual.

The Exercise Writer menu bar

Once *WISER EDUCATOR* is started (for installing and starting information, refer to *WISER EDUCATOR* User Manual, Page 2), the first screen is the user interface. To move to the authoring tool, hold down both the Control and Shift keys and click at the *WISER EDUCATOR* icon in the top left corner. (See the picture below.) There are four rows of icons and buttons across the top part of the screen. The first two rows consist of two icons and below them are six buttons as shown below.



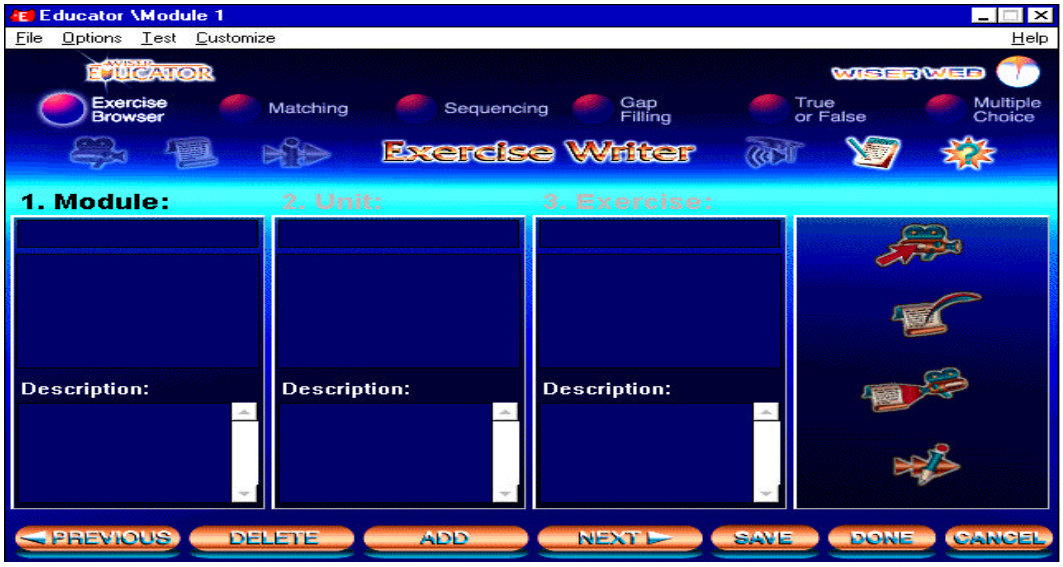
The third row consists of six icons which are shown below. The first four icons are not used while authoring, but they are used in the user interface to access available resources (such as video files, video with transcripts, notes about the exercises, and audio instructions.) The last two icons, one being a personal notepad, and another a help file, can be used by both the user and the author.



The last row (the “Material Structure” row) presents how *WISER EDUCATOR* organises the structure of materials that are authored. The Modules are comparable to chapters in a textbook while the Units are comparable to lessons within a chapter and the Exercises are comparable to the exercises within a lesson. In fact, when you start the authoring process, the first thing you have to create is the Volume which acts like a folder where all of the modules, units and exercises are kept. The Volume will be discussed in detail in Section 4.1

The Description boxes and Media and Smartlink icons

There are four columns underneath the material structure row of **1. Modules**, **2. Units**, and **3. Exercises** (see the following picture). The first three columns consist of two boxes one on top of each other. The upper boxes consist of titles of the modules, units, and exercises that you create. The lower boxes contain descriptions of each module, unit, and exercise. You may need to scroll down to see all of the description in these boxes. The last column on the right consists of four icons. These are, from top to bottom, **Select Media**, **Write Transcript**, **Smartlink**, and **Write Further Information**. When you start authoring you will need to use these icons.



THE PRE-AUTHORING PREPARATION

We need to prepare three things before we can start authoring: preparing the media files, preparing the transcripts, and writing the exercises. Some may find that it is easier to write the transcripts and the exercises while authoring, but I prefer to have everything ready before I start authoring.

Preparing the media files

Sources: Basically, the media files that are used are video clips that have been digitised (converted from a video cassette or a video CD onto a CD-ROM). There are a number of sources where you can find usable video clips. The video clips that were used in the sample units of authored ESP material were taken from

- commercially made videos such as Roadcrack and Flu Cure,
- TV programmes such as Chemical Colours
- Home-made videos such as Noise Pollution
- Commercially made CD-ROMs such as Rainforest

Apart from these sources, TASEAP has prepared digitised video clips that can be readily imported into *WISER EDUCATOR*. The clips are of two categories – Secondary video clips with transcripts that are already smartlinked, and Tertiary video clips without any transcripts. Furthermore, you can download some sample media clips from the Wiser web site at http://www.wiser.com.au.

Criteria for video selection: In general, when selecting the content of the material, one has to see to what extent the content meets the objectives of the course. Those that were included in the S**ample Units** were selected with the following criteria:

- Content – the content must pertain to the TASEAP priority areas (e.g. Ecology/Environmental Biology, Environmental management, Biotechnology, Organic Chemistry, Physics, Materials Science, Mechanics, Transport Engineering, Machine Design and Control, Construction Engineering, Energy Engineering, etc.)
- Clarity – the video must aid comprehension of the content i.e. when you hear "Next, we boil the milk", you should see milk being boiled instead of seeing the face of the narrator.
- Representation of various dialects – English is spoken by a large number of ethnic groups (not to mention American English, British English, and Australian English, to mention a few dialects of English spoken in the world) each with its own accent. Learners should be exposed to as many accents of English as possible so that they can communicate with both native speakers and non-native speakers of English. Although the majority of the video clips in the sample units were taken from videos made in Australia, one video clip in which a non-native speaker of English is interviewed has been included.
- Length: The video clip should not be longer than 5 minutes to ease the learner's memory load. Also when a selection is too long, it tends to become boring.

Digitising the video clips: If you are using a video clip from video cassettes, you need to convert it into a **.mov** or **.avi** file before you can import it into *WISER EDUCATOR.* There are a number of computer programmes that will do this such as *QUICKTIME* or *ADOBE PREMIERE*. The computer technician or educational technician at your institution should be able to help you with this task.

Writing the transcript

When you have selected the video clip that you will base your exercises on, the next thing is to transcribe it. The transcript should be edited by a native speaker of English because you may transcribe a word incorrectly. When you are satisfied with the accuracy of the transcript, you have two options. You can write the transcript and save it as a **.txt** file and import it into *WISER EDUCATOR*, or you can write the transcript while you are authoring. Remember that in case of importing files, the files must be **.txt** files only.

Writing the exercises

WISER EDUCATOR allows five types of learning activities:

- *Matching* – in which the learner matches what he hears with what he sees. The items to be matched can be individual words, phrases, or sentences.
- *Sequencing* – in which the learner puts words, phrases, sentences, or paragraphs in the order in which he hears them
- *Gap Filling* – in which the learner fills in the missing words after hearing them. The author can select words to be gapped or treat an entire selection as a dictation passage.
- *True or False* – in which the learner decides whether a statement is true or false according to what he hears

- *Multiple Choice* – in which the learner chooses the best answer to a question according to what he hears. One correct answer and up to three distractors (wrong answers) are possible for each question.

Each type of learning activity can have up to 30 items. However, with a maximum video length of 5 minutes, it is unlikely that each activity will have more than 30 items. Furthermore, with the short duration of the video, the content of the activities tend to overlap i.e. the same content may be dealt with in both Matching and Gap Filling. In my opinion, repeating the content in different activities helps the learner learn better without feeling bored.

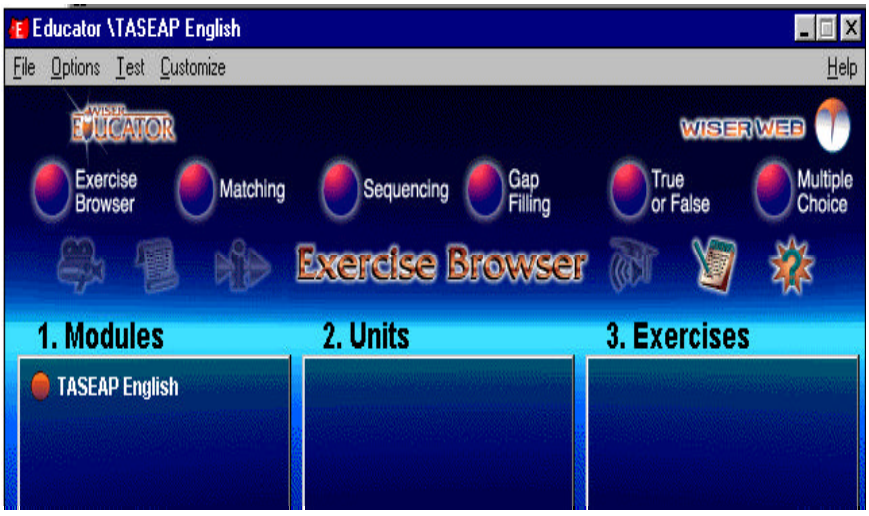
THE AUTHORING PROCESS

The following authoring process has been written with an effort to make the process as simple to follow as possible. Accordingly, advanced usage will not be dealt with here. From my experience, once you gain confidence with authoring from following the basic features of the programme, you will begin to explore and learn more on your own. Please refer to the *WISER EDUCATOR* Author Manual for details on advanced usage.

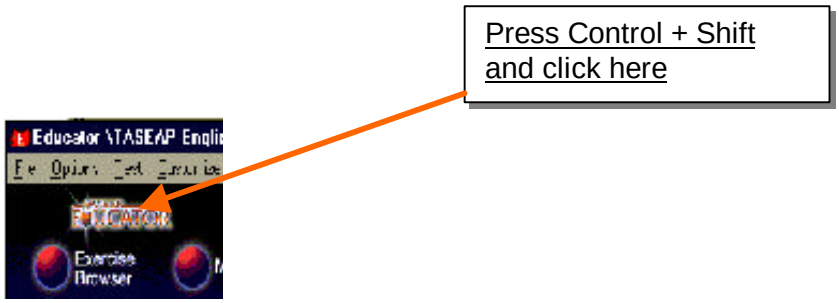
Creating/Opening a volume

A volume is like a folder where you keep all of the exercises that you have created. It is important that a list of the volume titles and their contents is available to both the author for exercise writing and editing purposes, and to the user (student) for learning purposes.

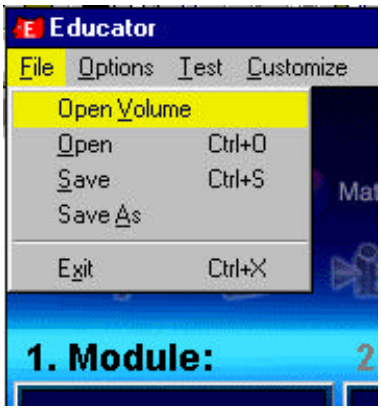
Step 1 Start *WISER EDUCATOR* by clicking on the desktop icon. After a welcome message, you will see this screen:



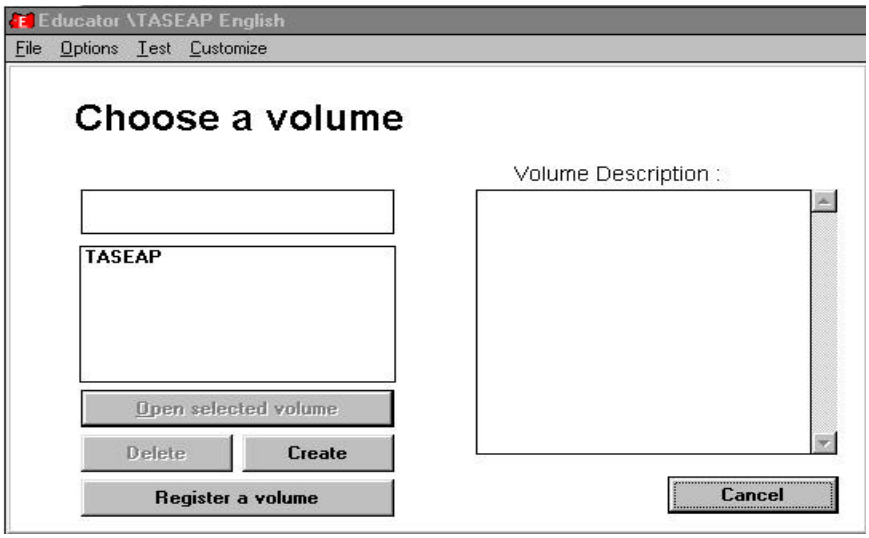
Step 2 Hold down *Control* and *Shift* and click the *WISER EDUCATOR* logo to switch to the Exercise Writer (the authoring tool.)



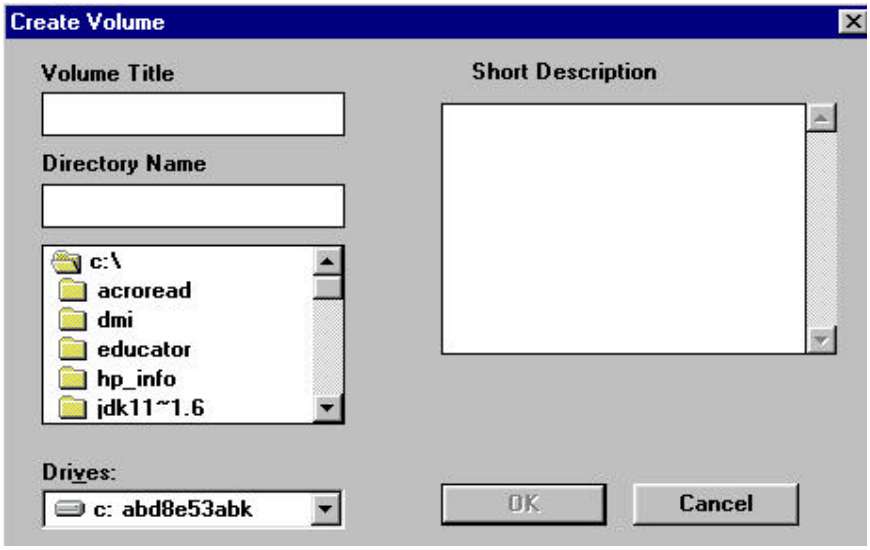
Step 3 Choose **Open Volume** from the **File** menu.



You will see this screen.

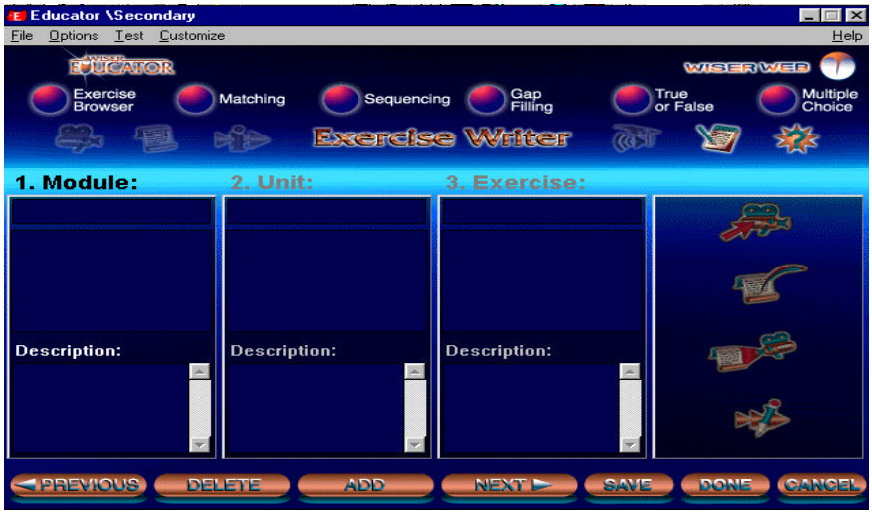


Step 4 If you want to create a completely new volume, click the **Create** button. You will see this screen.
(If you want to open an existing volume, go to *Step 7.*)



Step 5 Click in the rectangle box underneath **Volume Title**, and type in a name for the volume that you are going to create. It is a good idea to note down the volume title in case you forget.

Step 6 Click in the box under **Short Description**, and type in the description of the volume. Then click **OK**. You will see the following screen.



A volume is now created, and you are ready to go on to the next procedure.

Step 7 If you want to open or edit a volume that you have created earlier, select the volume you want, and then click **Open Selected Volume**. You will see the same screen as in *Step 6*.

Exercise structure

As mentioned in 2.2, *WISER EDUCATOR* organises the learning materials into a three-tier hierarchy: modules, units, and exercises. Within each exercise, there are five learning activities or tasks – matching, sequencing, true/false, gap filling

and multiple-choice. Erasing a module means erasing all of the units, exercises and tasks in that module. Thus when creating learning materials, you have to start with the module and proceed down to the exercises.

Step 8 Click in the blue area between **Module** and **Description**. A box will appear. Then click **ADD**. The word **Untitled 1** will appear twice under the word **1. Module**.

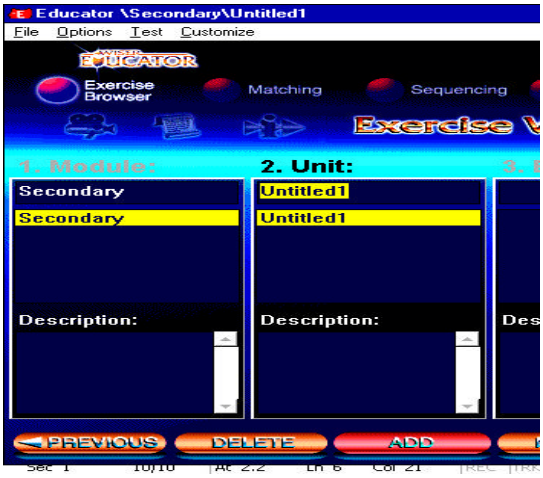
Step 9 Type in the name of the module. Then click **SAVE**. **Untitled 1** will change to the name you have typed in.

Step 10 Click in the box under **Description** which is underneath **1. Module** and type in the description of the module. Click **SAVE**.

Step 11 If you want to add more modules, click **ADD** and **Untitled 2** will appear. Repeat *Steps 9 - 10*.

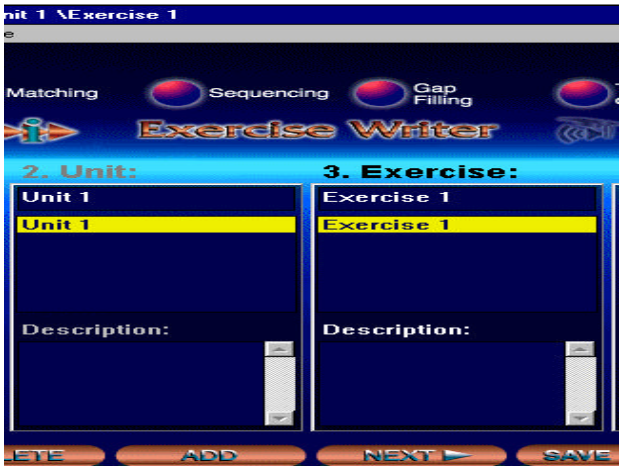
Step 12 If you want to delete a module, select the module you want to delete, then click **DELETE**. Click **SAVE**.

Step 13 To add units to a module, select the module you want to add units to, then click under **2. Unit**. The word **Untitled 1** will appear twice under **2. Unit**.



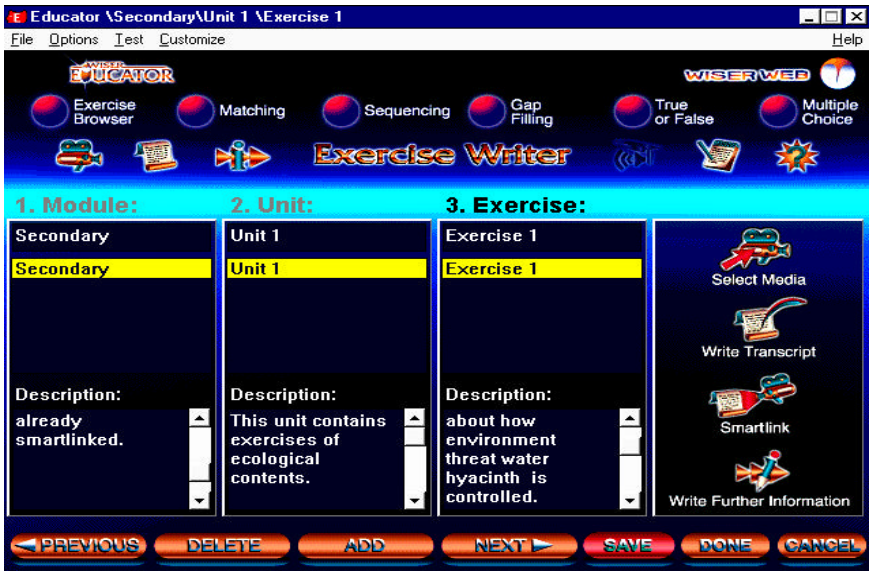
Note: *Steps 9 – 13* can be adopted for naming and giving descriptions to **2. Unit**, as well as adding and deleting units.

Step 14 To add exercises to a unit, select the unit you want to add exercises to, then click under **3. Exercise**. The word **Untitled 1** will appear twice under **3. Exercise**.



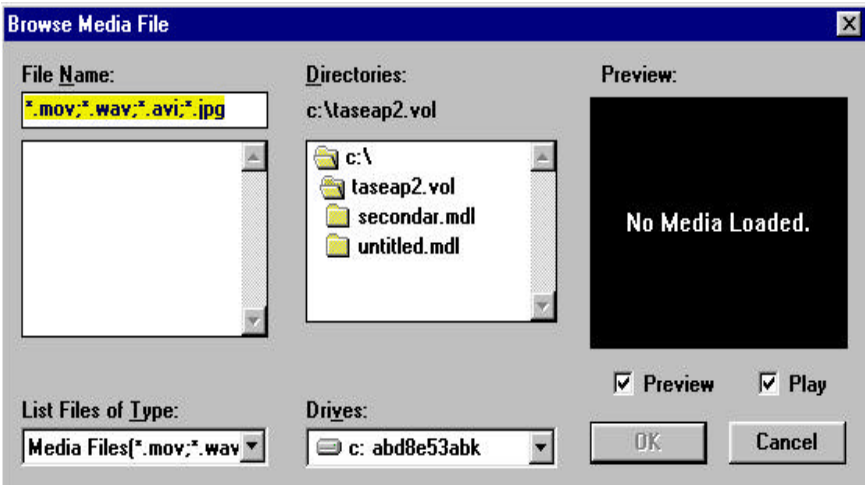
Note: *Steps 9 – 13* can be adopted for naming and giving descriptions to **3. Exercise**, as well as adding and deleting exercises.

Step 15 When you have added all of the exercises, click **SAVE**. You will see this screen. Notice that all of the exercise buttons are now highlighted.



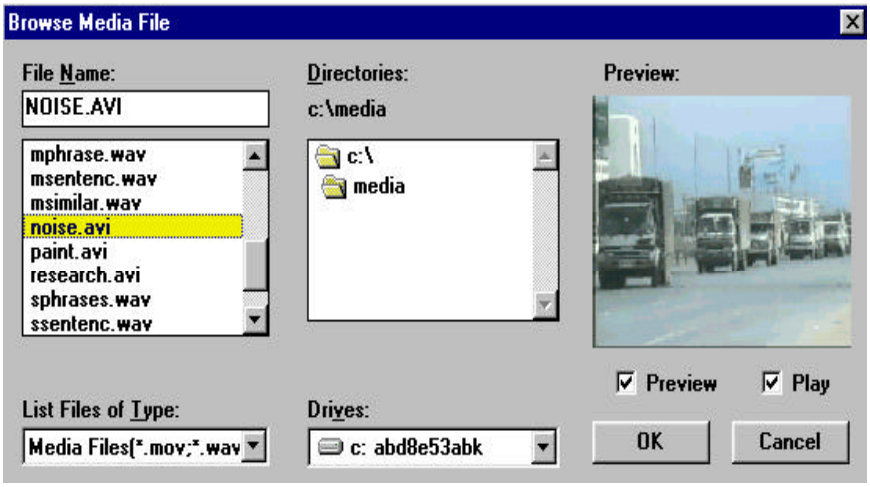
Importing media files

Step 16 Click **Select Media** (see the picture in *Step 15*). You will see the following screen.



Notice that in the box under **File Name**, there are four possible file formats -- **.mov**, **.wav**, **.avi**, and **.jpg**. The media files used in the **Sample Units** as well as all of the files in the **Secondary** and **Tertiary Resources** are of the **.avi** format. The **.mov** format is also a movie file. The **.wav** format indicates sound (only) files while the **.jpg** format indicates still picture files. In this booklet, we will not deal with importing sound or picture files.

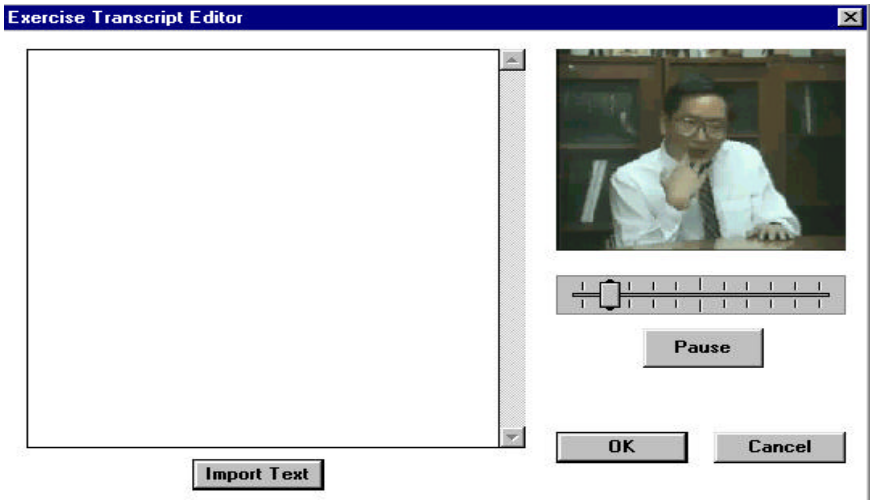
Step 17 Select the folder where you keep the media file that you have prepared in 3.1. Then select the file name. You should see the media file that you have chosen in the window with "No Media Loaded" in *Step 15,* and the screen should look like this.



Then, click **OK**. The picture in *Step 15* will appear.

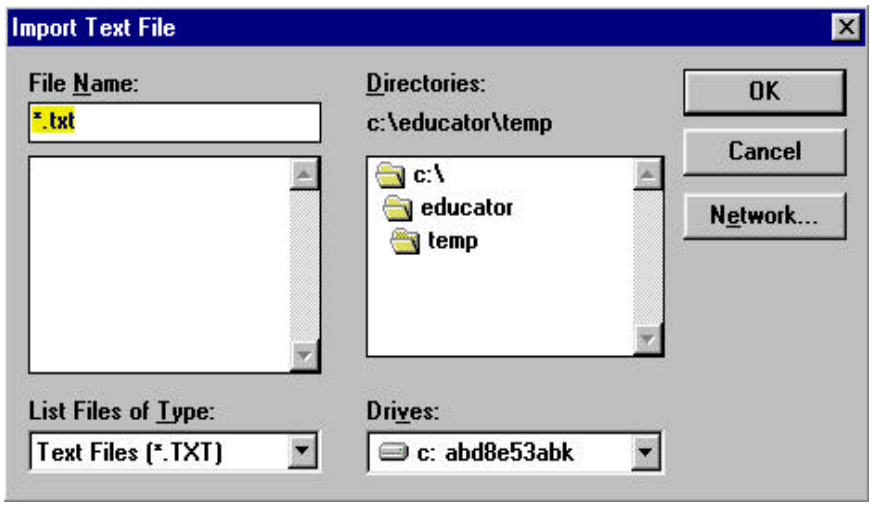
Writing transcripts

Step 18 Click **Write Transcript**. You will see this screen (with the media file shown).



Step 19 If you have not prepared a text file, you can transcribe by clicking in the empty box to the left of the media window and start writing. You can click **Pause** to stop the media file to write the transcript, and then click **Play** to listen to the file to continue writing the transcript. When you finish, click **OK**.

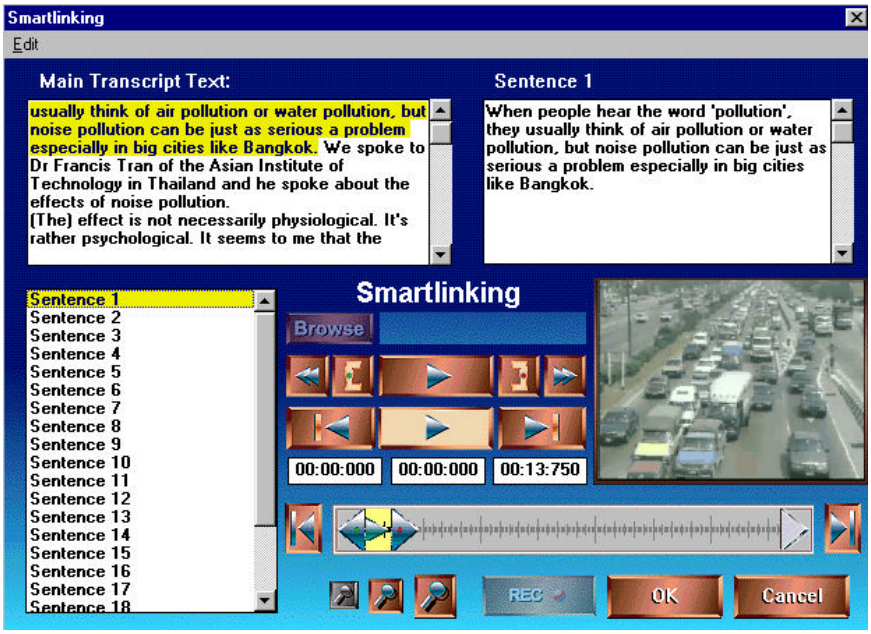
Step 20 If you have prepared a text file (.txt), click **Import Text**. You should see the following screen.



Step 21 Select the folder where you keep the text file, and then select the text file. Then click **OK**. The picture in *Step 15* will appear.

Smartlinking

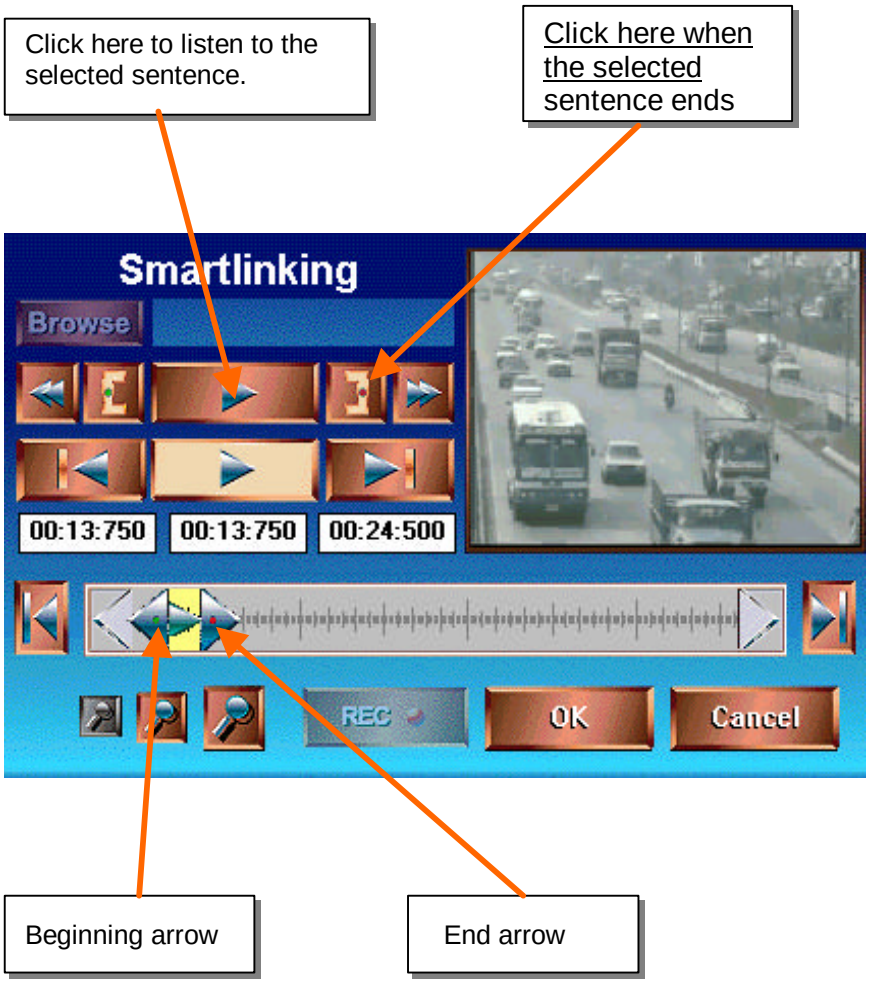
Step 22 Click **Smartlink** to match the transcript with the media file, sentence by sentence. This screen will appear.



Notice that the first sentence in the **Main Transcript Text** window is highlighted, and in the window labeled **Sentence 1**, the content of Sentence 1 is shown. Also notice that **Sentence 1** to **Sentence *n*** (the last sentence in the transcript) are listed in the bottom left window with **Sentence 1** highlighted. This means that *WISER EDUCATOR* will match the transcript for Sentence 1 with its exact position in the media files.

Step 23

In the middle of the screen underneath **Smartlinking**, there are a number of rows of buttons similar to those on a regular audio cassette player. These buttons are used while smartlinking the transcript to the media file. Basically you only need two buttons which will be covered in the next paragraph. For more information on the other buttons, refer to *WISER EDUCATOR* Author Manual, Pages 9 – 12. Click the upper right arrow in the middle to listen to the first sentence. When you hear the end of the first sentence, click the stop button to the right of the right arrow button to tell *WISER EDUCATOR* that the first sentence has ended.

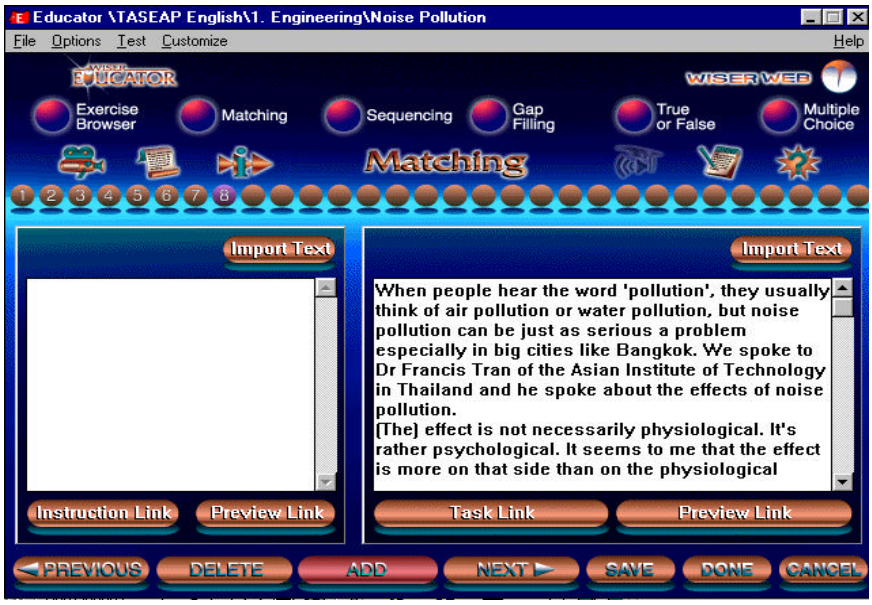


Step 24 Click at **NEXT**. The next sentence in the **Main Transcript Text** will be highlighted, and its content will be displayed in the window to the right of the **Main Transcript Text**. Notice also that the beginning arrow is now pointing at the beginning of this sentence, but the end arrow is pointing at the end of the media file. Therefore, it is very important that you click the stop button right when the sentence you are working on ends.

Note: *Steps 23 – 24* can be repeated for the rest of the sentences. When all of the sentences are smartlinked, click **FINISH**. The screen will go back to the picture in *Step 15*. From now on, *WISER EDUCATOR* will automatically match the sentences in the transcript with those in the media file for all of the five learning activities that follow.

Writing activities for matching

Step 25 Click the **Matching** button. You will see this screen.



Step 26 In the empty **Import Text** window to the left, type the instruction for the activity, e.g. “Which sentence can you hear in this clip?” Do not hit “return” while your are working in this window.

Step 27 In the window to the right, you should see the whole transcript that you have already smartlinked. Delete all but the sentences that you will use, or delete everything and type in a new sentence. Then click **SAVE**.

Step 28 Click **Task Link**. You should see this screen.

Notice that **Task 1** in the task list window is now highlighted, and the sentence for **Task 1** appears in the **Matching Task 1** window. Notice also that the beginning and end arrows are at the position where the sentence for **Task 1** is in the media file. Click **OK**. The screen will go back to the picture in *Step 15*. Click **SAVE**.

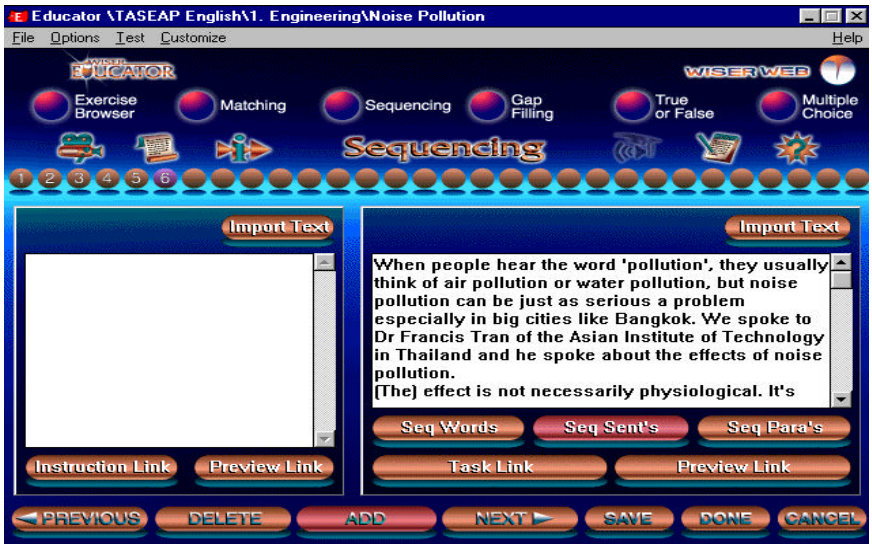
Step 29 Click **ADD** if you want to author more matching tasks.

Note: *Steps 25 – 28* can be repeated for additional Matching activities.

Step 30 Click **DONE** to view the exercise in the Exercise Browser mode, or go to the next step for sequencing activities.

Writing activities for sequencing

Step 31 Click the **Sequencing** button, you will see this screen.



Step 32 Type in the instruction for the Sequencing activity in the empty window on the left. Do not hit “return” while your are working in this window.

Step 33 In the window on the right, delete all but the sentence(s)/phrase(s) you want to use, or type in new sentences/phrases.

Step 34 Click **Seq Words** if you want every word in a sentence to be sequenced, or click **Seq Sent’s** if you want every sentence in a selection to be sequenced, or click **Seq Para’s** if you want every paragraph in a selection to be sequenced. Click **SAVE**.

Step 35 Click **Task Link**. You will see a similar screen to the one in *Step 27*.

Note: *Steps 28 – 30* can be repeated for tasklinking the sequencing activities.

Writing activities for gap filling

Step 36 Click the **Gap Filling** button. You should see the following screen.

Step 37 In the empty window on the left, type the instruction for the Gap Filling activity. Do not hit “return” while your are working in this window.

Step 38 In the window on the right, delete all but the sentence(s) you want to use in the Gap Filling activity.

Step 39 If you want every word in the selection to be filled in, click **SAVE**, and go to *Step 42.*

Step 40 If you want certain words in the selection to be filled in, click the **Free Words** button. The background colour of the window on the right will turn to blue. Click on the words that you do not want to be filled in. The colour of the words that you click on will change to yellow. Those that will be gapped will be shown in blue. Click **Free Words** again to exit the Free Words mode.

Step 41 Click the **Show Free Words** button if you want to show all of the words that you click in *Step 39*. If you do not click this button, the students will have to click on the **Free Words** button in the Exercise Browser mode to view the words that you clicked in *Step 39.*

Step 42 In this activity, in the case where every word in a selection is missing, the student can select the frequency of missing words from every second word to every fifth word. If you do not want them to be able to do so, you need to click on the **Disable Gap Freq** button.

Step 43 Click the **Task Link** button.

Note: Repeat *Steps 28 – 30* for task linking.

Writing activities for True or False

Step 44 Click the **True or False** button. You should see this screen.

Step 45 In the empty window on the left, type the instruction for the True or False activity as well as the statement that the student will have to identify as “True” or “False”. Do not hit “return” while you are working in this window.

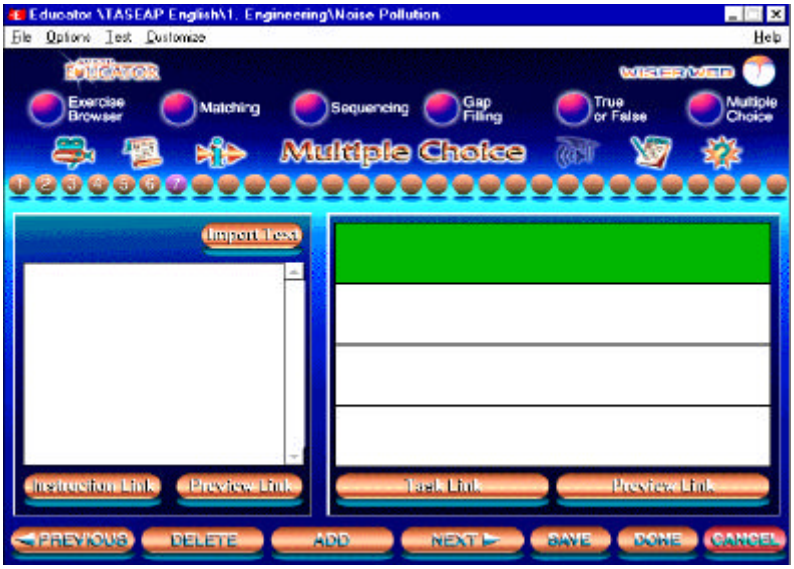
Step 46 In the right window, click the **True** button if the statement is true, or click the **False** button if the statement is false.

Step 47 Click **Task Link**.

Note: Repeat *Steps 28 – 30* for task linking.

Writing activities for multiple choice

Step 48 Click the **Multiple Choice** button. You should see this screen.



Step 49 In the empty window on the left, type the instruction for the multiple choice activity as well as the question that the student will have to select the best answer for. Do not hit “return” while your are working in this window.

Step 50 In the four stacking windows on the right, type the correct answer in the first window which has a green background colour. Type each of the distractors in the rest of the windows.

Step 51 Click the **Task Link** button.

Note: Repeat *Steps 28 – 30* for tasklinking.

CONCLUSION

There may seem to be a lot of steps to follow, but this is due to my attempt to break down the authoring procedure into small and simple to follow steps. Once you have prepared the media file, written the transcript and learning activities, it takes approximately an average of 2 hours to complete one CALL exercise (i.e. a 3-minute video clip and five types of learning activities based on the video clip), following all of the steps. Of course, for the first few attempts, it may take longer. After a few exercises however, you will find that the authoring process becomes easier. After yet a few more exercises, you will start experimenting with the programme and learn some new tricks, as well as discovering some limitations of the programme. Do not forget that *WISER EDUCATOR* is a template. That’s why it is easy to author with. Yet, it is not ‘bug-free’. As with teaching where we have to be creative and think on our toes, authoring CALL materials requires the same creativity and flexibility. ENJOY.

Glossary

Access To read data from or write data to a mass storage device.

Authoring Producing instructional materials, such as courseware, lessons, quizzes, or tests, for use with computers. The process generally involves the preparation of content, producing multimedia files, programming and publishing the final product.

Author To write learning materials using a computer application such as an authoring program.

Authoring tool A tool, usually software or an authoring package used to author a courseware, such as ToolBook, Wiser Educator, Director, Hot Potatoes, etc.

Browser A program that is used to look at various kinds of internet resources, particularly world wide web pages. Two well-known ones are: Netscape Navigator and Internet Explorer.

Bug-free A bug is an error in the logic of a program which is often detected after it is released. “Bug-free” therefore means “without defect”.

CALL Computer Assisted Language Learning or Computer Aided Language Learning. CALL refers to the use of computers in the learning or teaching of languages.

CD-ROM A type of optical disk capable of storing large amounts of data. A single CD-ROM has the storage capacity of 600 floppy disks (about 650Mbytes). To read a CD, a CD-ROM player is required. CD-ROMs are particularly well-suited to information that requires large storage capacity such as graphics, sound, and especially video.

CD-ROM-based authoring Using selected authoring software to produce multimedia courseware which is then pressed stored onto CD-ROM.

Central server A central computer that stores files on a network.

Chat A real-time communication between users via computer networks. One user can enter text by typing on the keyboard. The text will appear on the other user's screen.

Computer-Mediated Communication (CMC) Communicating with other people using computers. There are two kinds of communicating: synchronous (real-time communication e.g. chat, mud) and asynchronous (delayed communication e.g. e-mail).

CU-SeeMe A video conferencing program that uses the internet to transmit audio and video data. The computer must be equipped with a sound card, speakers, and a video camera.

Customized software 'Fourth or fifth generation' authoring software. Many customized software provide full programming capabilities, although they are characterised by 'templates' or 'widgets' which allow programming without the need to write programming code.

Desktop conferencing Conducting a meeting or discussion between two or more participants at different sites by using computer networks to transmit audio and video data (similar to a video telephone).

Download To transfer a file, data or programs from a server to a local computer.

Edutainment A coined term (education + entertainment) referring to software (especially games) that provides users with both educational and entertainment value.

Electronic-mail (E-mail) A system in which messages, usually text, are sent from one person to another via computer.

Feedback The response to one's ideas (proposals, actions, etc.) in the form of approval, disapproval, and suggestions.

FTP File Transfer Protocol. It is used for sending different kinds of files on the Internet.

Gap filling A learning activity in which the learner fills in the missing words after hearing them. The author can select words to be gapped or treat an entire selection as a dictation passage.

Help desk A unit within the CALL section that responds to user's technical questions. Questions and answers can be delivered by telephone, e-mail, BBS, or fax.

HTML (HyperText Markup Language) The coding language used to create Hypertext documents for use on the World Wide Web.

HTTP (HyperText Transfer Protocol) It is used for moving hypertext files across the internet.

Hypermedia A system that links graphics, sound, and video files in addition to text.

Hypertext A database system that can be linked to each other. The user can move from one database to another with ease using a web browser.

Icon A little picture intended to represent something bigger, such as a program or a choice of action or object.

Interactive media The system that allows for a two-way interaction or exchange of information.

Interface (user interface) The point(s) of connection between the user and the computer (i.e. the screen, keyboard and mouse).

Internet The global computer network that allows people and computers to communicate and share resources.

Intranet A network based on TCP/IP protocols which operates within an organisation.

LAN (Local Area Network). It is a network that connects computers which are close to each other, usually in the same building, and linked by a cable.

Local server A computer server which is internal to an organisation (as opposed to a remote server). Typically, it provides files and print services to network users (or clients).

Log-in software A program which is used to make a computer system or network recognizes the user so that he or she can begin a computer session. For larger systems and networks, the user usually needs to enter a username and a password before the computer system will allow him or her to execute programs.

Mailing list A mailing system that allows users to send e-mail automatically to a large number of addresses.

Matching A learning activity in which the learner matches what he hears with what he sees. The items to be matched can be individual words, phrases, or sentences.

Media file Non-text file of sounds (*.wav, .midi), videos (*.avi, .mov), and graphics (*.jpg, *.gif).

MOO MOO stands for Mud, Object Oriented. MOO, developed by Stephen White, is a public domain. MOO is an implementation of MUD.

MUD MUD stands for Multi-User Dimension. It is a cyberspace where users can interact with one another such as discussion, playing games, role playing, etc.

Multimedia The use of computers that integrates text, graphics, video, animation, and sound.

Multiple choice A learning activity in which the learner chooses the best answer to a question according to what he hears. One correct answer and up to three distractors (wrong answers) are possible for each question.

Navigation The act of figuring out a correct path within the computer program.

Network A group of two or more computer systems linked together. There are many types of computer networks such as Local-Area Networks (LANs) (The computers are geographically close together) and Wide-Area Networks (WANs) (The computers are farther apart and are connected by telephone lines or radio waves.)

Networking A group of two or more computer systems linked together. There are many types of computer networks, such as local area networks (LANs) -- the computers are geographically close together, and wide area networks (WANs) -- the computers are farther apart and are connected by telephone lines or radio waves.

Online services A kind of service that provides the user with a variety of data transmitted over telecommunications lines. Online services provide an

infrastructure in which users can communicate with one another, either by exchanging e-mail messages or by participating in online conferences (forums).

Password A secret sequence of letters and other symbols needed to log in to a computer system as an authorized user. When a user enters a password, it appears as a line of asterisks (********) so no one can read it.

Platform The underlying hardware or software for a system. For example, the platform might be an Intel 80486 processor running DOS Version 6.0. The platform could also be UNIX machines on an Ethernet network.

Pop-up menu A menu that appears temporarily when the user clicks the mouse button on a selection. Once the user makes a selection from a pop-up menu, the menu usually disappears.

RealAudio A streaming technology developed by RealNetworks for transmitting live audio over the Internet.

RealVideo A streaming technology developed by RealNetworks for transmitting live video over the Internet.

SAC Self Access Centre, a place where materials are provided for learners so they can learn in a manner which suits them best in their own way, in their own time and at their own pace.

Scroll To move the content part of a window in an application up and down usually by clicking and dragging arrows pointing in the direction of the movement.

Search engine A program that searches documents on the Web such as Alta Vista, Infoseek, and Excite.

Security software A utility program that is used to check a system for security vulnerabilities via the Internet.

Sequencing The activity in which the learner puts words, phrases, sentences, or paragraphs in the order in which he hears them.

Shareware A program that is distributed on the basis of an honor system. Most Shareware is delivered free of charge, but the author usually requests that you pay a small fee if you like the program and use it regularly. Shareware is inexpensive because it is usually produced by a single programmer and is offered directly to customers. Shareware is copyrighted.

Smartlink A word coined by *WISER EDUCATOR* to mean a feature in the program that matches/links between the sound and picture in a video file and the transcript in a text file in units of sentences.

Software Computer instructions or data stored electronically. Software is divided into two categories: (1) Systems software -- the operating system and utilities that enable the computer to function; (2) Applications software-- programs that do real work for users such as word processors, spreadsheets, and database management.

Subject directory A listing of Internet resources arranged by subject categories such as Yahoo and AltaVista.

True or false A learning activity in which the learner decides whether a statement is true or false according to what he hears.

Upload To transfer a file or data or programs over a digital communications linked from your local computer to a remote computer.

URL URL stands for Uniform Resource Locator. It is a unique address of a web page.

User policy A policy which limits the way to use a CALL section, for instance, some networks are restricted to non-commercial use only.

Utility software A small helper program such as screensavers, font managers, compression programs, and file finders.

Virus A damaging program that is transferred from one computer to another computer via phone lines or floppy disks.

Web-based authoring Using selected authoring software to a produce courseware and store it for use on the Internet.

World Wide Web (WWW) An internet system that supports links to other documents such as text, graphs, audio, and video files using HyperText Markup Language (HTML).

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SECTION SIX: AUTHORING WITH *WISER EDUCATOR*

Printed materials

WISER Software. (1998). **WISER EDUCATOR: Author Manual.** South Melbourne, Victoria, Australia.

WISER Software. (1998). **WISER EDUCATOR: User Manual.** South Melbourne, Victoria, Australia.

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