The Arabic *Gemini* for Advanced Reading

Mohammed Jiyad, Mount Holyoke College

Abstract

Throughout all changes in the foreign language teaching profession occasioned by the appearance of new methodologies, reading has remained a central component in foreign language instruction. Foreign language educators have continually emphasized the importance of reading as one of the main four basic skills students are expected to acquire, (Beauvois, 1992; Brown, 1987; Kelly, 1969; Chastain, 1988; Freiberg & Driscoll, 1992; Grellet, 1981; McLaughlin, 1987; Rivers, 1983, 1988; and Omaggio, 1986.) Virtually every current foreign language textbook contains reading selections accompanied by some kind of comprehension exercises, many of which reflect the ACTFL Proficiency Guidelines, (Byrnes 1985.) Several leading theorists have asserted the primacy of reading materials as a source of information for students' language acquisition and even as a basis for classroom instruction, (Gass & Madden, 1985; Krashen, 1982, 1985; Krashen & Terrell, 1983; Rivers, 1983, 1985, 1988; Swaffar et al., 1991; and Freeman & Freeman, 1992.)

Computers can function as patient tutors in individualized learning situations, and their inherent interactivity generally facilitates student's attempts to understand the language of the text. In addition, students' willingness to use computers outside of class for language learning purposes frees up valuable class time for more in-depth discussion of the reading texts and other related communicative activities. Computer-based reading programs offer a promising alternative approach to guiding students in the development of reading comprehension skills, but they have not yet reached their full instructional potentials. Most commercial and university-produced reading programs suffer from serious defects in instructional design. Therefore, **Gemini** has been designed to fill up that gap. This national project includes seven languages; Arabic, Chinese, French, German, Hebrew, Japanese, and Russian. The team that has created it was drawn from American universities all over the country.

The **Arabic Gemini** includes procedures to model appropriate bi-directional text processing strategies in order to direct students' attention to macro-level information (the development of the general theme of a story) and micro-level information (important textual details related to that general theme). This authoring system features tools to devise macro-level questions to verify students' comprehension of the evolution of the major idea/s of the story and micro-level questions to confirm their understanding of the language used to convey those ideas. The software also supports the creation of a variety of prompting devices and helps screens to emphasize macro-level information (e.g., discourse markers and anaphoric expressions) and to underscore micro-level information (e.g., salient vocabulary expressions and syntactic structures). The **Arabic Gemini's** prompting devices include links to digital audio, digital video, analog video, and graphic files; while its help screens include two generic help screens, a set of video-based help screens, custom made dictionaries, and student notepads. The combined effect of the use of appropriate questioning techniques supported by pertinent pedagogical scaffolding results in lesson designs which guide students to acquire effective bi-directional reading strategies.

1. Why use Technology in Language Teaching?

Technological devices can be useful for language instructors who wish to bring the sound and sight of another language and culture into the classroom. Language labs, tape recorders, overhead projectors and slide/filmstrip projectors have been used in language teaching and learning. New ways to use video and computer technologies are rapidly becoming commonplace in language classroom as teachers design instruction that **appeals to the media related interests of students**. According to Lucie Fjeldstad, IBM President in charge of multimedia in education, "An average kid will have spent 20,000 hours in front of TV by the age 16. We need to take the entertaining aspects of television and add it to education (Rogers 1992). Advances in technology are occurring so rapidly that it is difficult to develop instructional uses for them. As Garrett (1991) points out, "Technology that can be taken for granted today is already light-years ahead of the profession's ability to integrate a principled use of it into classroom and the curriculum."

In classroom teaching and learning, students generally encounter a body of content and process knowledge that the teachers has organized in order to aid understanding and internalization. The decision regarding how to engage students with instructional processes rests with the teacher. Thus, in the case of technology, the teacher determines to what extent technological devices will be used to enhance language learning.

Students who are familiar with television are used to rapid changes in scenes; entertaining and colorful visual stimuli; associated and synchronized auditory accompaniments, whether musical or voiced; story lines that are quickly resolved; and a completely contextualized scenes and language. Add to this list the effect of blending visual and auditory presentations, occasionally enhanced with a splash of reading from the screen, and one can easily see the potential for using technology to captivate students interests. Furthermore, a videotape, videodisc, or a satellite transmission can enliven the target language and culture for students in classroom. With the age of video games and Internet the horizon is even expanding beyond imagination.

A teacher's decision to use related technology is similar to the decision to use a particular exercise or workbook handout. The technological device, like the practice exercise, is a tool that helps the learner interact with the body of content knowledge and processes. Teachers who have a philosophy of how students learn will opt to design instructional tasks that are consistent with that philosophy. The excitement of using a new technology is often accompanied by anxiety on the part of the teacher and students. Certainly, an increased expenditure of time to design meaningful instruction will be needed. As the teacher decides how to deliver instruction with the assistance of a technological tool, he/she must consider the following guidelines for selection:

What can my students presently do with the language?
What will this tool help them learn how to do?
How will it help them learn how to do it?
What will it cost in terms of time, planning, supplies, and equipment?
Can I get some assistance in terms of services and resources?
What are the alternatives?
Is this the best way to accomplish the objectives of instruction and meet the needs of my students?

One of the challenges of teaching foreign languages is to present the students with a living, vibrant people who use the target language for daily communication. Cultural elements constitute the multidimensional environment in which the language is used. The textbook can offer authentic visual and print dimensions. Time and expertise are required to make successful use of any tool in the classroom. What constitutes successful use? If learning on the part of the student has been helped by the use of a tool, then the tool has been used successfully. In recent years the foreign language teaching profession has made considerable strides in producing videos, textbooks and Computer-Assisted Language Learning (CALL) software to enhance learners' language skills.

2. The Current State of Reading in Foreign Languages Teaching

Throughout all changes in the foreign language teaching profession occasioned by the appearance of new methodologies, reading has remained a central component in foreign language instruction. Foreign language educators have continually emphasized the importance of reading as one of the main four basic skills students are expected to acquire, (Beauvois, 1992; Brown, 1987; Kelly, 1969; Chastain, 1988; Freiberg & Driscoll, 1992; Grellet, 1981; McLaughlin, 1987; Rivers, 1983, 1988; and Omaggio, 1986.) Virtually every current foreign language textbook contains reading selections accompanied by some kind of comprehension exercises, many of which reflect the ACTFL Proficiency Guidelines, (Byrnes 1985.) Several leading theorists have asserted the primacy of reading materials as a source of information for students' language acquisition and even as a basis for classroom instruction, (Gass & Madden, 1985; Krashen, 1982, 1985; Krashen & Terrell, 1983; Rivers, 1983, 1985, 1988; Swaffar et al., 1991; and Freeman & Freeman, 1992.)

Reading has unquestionably become a focal point in the profession and has attracted considerable attention from theorists and practitioners alike. At the 1996 annual meeting of the American Council on the Teaching of Foreign languages, presentations on instructional methods included more reports on reading than any of the other three skill areas. Of the 51 presentations on instructional methods, 23 (45%) included reports on reading. Much of the increased awareness of the importance of reading, and much of the impetus for the increased research on reading stems from the seminal work of June Phillips and Patricia Carrell which started in mid 70s and early 80s.

However, despite the profession's renewed interest in reading, the instructional approach still prevalent in the classroom today remains bound to traditional teaching modes; the teacher presents a short written text to students in a textbook- frequently one with native language glosses in the margin- and directs students to answer content questions over the text. The common practice for teachers who attempt to teach reading in the classroom is that a teacher typically tells students in class to read a passage for the following day. In class the following day, the teacher asks students whether they have any questions about the language used in the passage. If so, the teacher takes class time to explain words or phrases that students should have already learned. If students have no language type questions, the teacher proceeds to a series of factual questions over the content of the passage. The teacher frequently discovers in this process that some students fail to understand many key words and phrases. Again, the teacher has to take class time to explain vocabulary that the students should already understand. This less than successful approach clearly leaves little time to discuss the ideas presented in the text or to use the text as a basis for more productive class activities. It clearly does not make efficient use of class time and, still worse, does not provide students with any appreciable guidance in how to develop effective reading comprehension strategies.

Computer-based reading programs offer a promising alternative approach to guiding students in the development of reading comprehension skills, but they have not yet reached their full instructional potentials. Computers can function as patient tutors in individualized learning situations, and their inherent interactivity generally facilitates student's attempts to understand the language of the text. In addition, students' willingness to use computers outside of class for language learning purposes frees up valuable class time for more in-depth discussion of the reading texts and other related communicative activities. However, most university-produced reading programs suffer from serious defects in instructional design: some programs simply display the written text on computer screen and gloss words and phrases; others convert reading passages into cloze exercises under the guise of teaching reading comprehension skills; and still others add uninformative, dramatic oral readings to otherwise unexplained literary passages. Commercially produced programs also fail to incorporate adequate instructional techniques in their materials. These kinds of generic programs are designed for a broad spectrum of students and, consequently, cannot meet the instructional requirements of students at specific institutions. As noted by Gilbert and Green in their 1995 report to the National Educational Association, "instructional technology is not a one context serves all solution." Most important of all, none of the current reading programs -- neither those developed by university personnel nor those produced by commercial companies -- include specific comprehension checks to verify students' understanding of what they have read. As the profession grapples with the problem of designing programs to teach specific foreign language skills, it continues to devote inordinate attention to the technical capabilities of computers at the expense of sound instructional theory.

The solution to the problem of generic reading programs and inadequate instructional design is to develop **an authoring system with a clearly defined instructional focus on reading comprehension, replete with appropriate pedagogical support components, that instructors can systematically use to create lessons that apply directly to their own classes.** The team's plan was to develop and disseminate Gemini, an authoring system to enable faculty authors to create reading lessons to meet their own instructional requirements. The instructional design of this authoring system, and the lessons created by means of it, reflected the principles of the latest research in foreign language reading and guides students to use effective reading strategies. Putting the power of the computer into the hands of experienced instructors in the form of an easy-to-use authoring system with a clearly defined instructional focus provides a carefully conceived solution to the pervasive need for well designed foreign language reading courseware for students at all levels of instruction.

Probably many language instructors want to make use of computer technology to enhance their teaching but can ill afford to devote the time necessary to complete lengthy technology projects in today's climate of increasing faculty workloads and dwindling resources. The solution to this problem lies **in using an authoring system to develop ready-to-use lessons in a variety of commonly and less commonly taught languages and distributing the authoring system with these lessons to enable individual instructors to tailor them to their own teaching situations.** The distribution of user-modifiable lessons provides well designed reading programs to the profession at large while maintaining the immediate applicability of those lessons to specific educational context. This combination of ready-to-use authoring system makes a unique contribution to the foreign language teaching profession.

3. The Usefulness of the System to Instructors in Foreign Languages.

Our project was set to accomplish two prerequisite goals and culminated in the distribution of three sets of products with excellent potential for use by foreign language and international studies programs.

> Goals:
> 1. the development and evaluation of the Gemini reading comprehension authoring system
> 2. the development and evaluation of individual reading lessons in nine foreign languages
>
> Products:
> 1. the distribution of reading lessons along with the authoring system
> 2. the distribution of the authoring system itself on a not-for-profit basis
> 3. the distribution of fully interactive lessons to remote sites across the Internet

These goals and products, and the value of each to the profession, are briefly described below.

The development and evaluation of the Gemini authoring system underlies all other activities of the project. The significance of Gemini's development lies in the fact that the authoring system was guided by research-based teaching principles, not by technological expediency or multimedia bells and whistles. Instructional effectiveness formed the cornerstone and completely informed the Gemini authoring system. Because of the implementation of fundamental instructional principles, the authoring system itself is expected to be useful to the teaching profession. In addition, the collaborative efforts of reading specialists, computer programmers, computer assisted language learning experts, curriculum designers, and experienced language instructors in the authoring system's development and evaluation has served to provide a working model for other technology projects.

The development and evaluation of the individual reading lessons have generated a wealth of data in support of their instructional value and the appropriate use of authoring systems to create high quality language learning courseware. The analysis of data taken from students' actual use of lessons has also yielded valuable insights into learning styles in the acquisition of foreign language reading proficiency. Such data have not been previously available because of the difficulty associated with directly observing students' use of reading strategies in what is essentially autonomous activity. Dissemination of the results of these analyses proves to be useful both to researchers and practitioners in the profession. It can provide them with empirical evidence to guide further exploration and implementation of instructional features in reading programs designed to capitalize on students' use of specific reading strategies.

The distribution of reading lessons whose instructional effectiveness was thoroughly evaluated has been immediately useful to instructors of nine specific languages: Arabic, Chinese, French, German, Hebrew, Japanese, Russian, Spanish, and Swahili. The distribution of the authoring system with the lessons further extended their usefulness by allowing instructors to modify the lessons' instructional features to meet their own educational requirements. Instructors were of course also able to use the authoring system to create new lessons for other reading selections. Moreover, the inclusion of the authoring system with the lessons in a single package not only permit foreign language faculty to replicate evaluation studies to be completed as part of this project but also to undertake new evaluation studies to explore the instructional value of specific lesson designs, all within the academic context of their own institutions.

The distribution of Gemini by itself on a non-for-profit basis has a long range impact on the profession. Its availability to institutions enables instructors to develop reading lessons in virtually any foreign language. To support instructors' use of Gemini and to maintain up-to-date information on innovative uses of the authoring system during and after the end of the funding period of this project, services is expanded on the world wide web site already established for the *Libra* authoring system. This continuing support provides the

technical infrastructure and professional guidance necessary for lesson development well into the future.

The electronic distribution of reading lessons across the Internet in the form of World Wide Web document (HTML documents) provides immediate access to the lessons by students at remote sites. These lessons retain their set of interactive features, including the transmission of student data directly to instructors and enable students in both academic and non-academic settings to take full advantage of all the learning materials. The availability of interactive HTML documents helps meet the burgeoning demand for substantial distance education programs in the profession by making authentic reading texts technologically and pedagogically accessible to learners in a wide variety of locations. In addition, the authoring procedures built into our system to convert lessons into interactive web documents also enable faculty authors to distribute their own reading lessons across the Internet.

In summary, the goals, products, and research results of this project prove to be very useful to profession in the short term and in the long term. In the short term, the distribution of reading lessons in specific languages allows instructors to make immediate use of the courseware products of demonstrable instructional quality. In the long term, instructors are able to use the authoring system to modify existing lessons, to create additional reading lessons, to continue investigation of instructional reading models and students' reading styles, and to distribute reading material across the Internet.

4.1. Research on More Effective Methods of Providing Instruction and Achieving Competency in Foreign Languages

While CALL has at least paid superficial attention to the importance of research-based principles in language learning software (see for example, Alatis 1991), most authoring system developers have virtually disregarded the contributions offered by second language acquisition research. The instructional basis of Gemini directly reflects the principles of current research in reading comprehension and includes proven techniques of effective foreign language teaching. Consideration of these principles and techniques yields several essential tenets which have guided our development of Gemini. We list these tenets below and discuss their implementation in the authoring system.

A. The Use of advance organizers is necessary to prepare students to process information from a text.

Advance organizers are said to instantiate comprehenders' mental schemata relevant to the content of the text by prompting comprehenders to activate their background knowledge about topic of communication. Comprehenders' higher degree of expectancy then enables them to process information from the text in more plausible and personally meaningful ways than they otherwise could. Advance organizers often take the forum of brainstorming about the topics of communication, generating hypotheses about anticipated

events in the story, studying images portraying the characters and actions in the story, and learning pertinent vocabulary items.

Gemini contains straightforward authoring procedures to create lesson designs which provides prompts to guide students to generate plausible hypotheses about events described in the text, which present multimedia displays (e.g., text, graphics, sound, and video) to provide information about the characters and actions of the story, and which contain hyperactive text sequences to present essential vocabulary items.

B. Readers construct a mental representation of the meaning of a text by extracting semantic content from syntactic forms in the text in increasingly abstract macro-propositions.

Readers derive information from a text by parsing sentences in the text and creating semantic representations of those sentences (micro-level text processing). They then relate these semantic representations to those of previously processed sentences to form more general semantic representations (macro-level text processing). As readers proceed through the text, they continue building increasing more general macro-propositions, deleting irrelevant details in the process, and integrating those macro-propositions into an evolving mental model of their understanding of the meaning of the text.

Carrell (1987) suggested the following corollary. He said, "Foreign language students need explicit guidance in the appropriate use of micro-level and macro-level text processing strategies." Without adequate guidance, foreign language students tend to adopt either predominantly micro-level or macro-level text processing strategies; that is they either devote primary attention to the use of syntactic parsing strategies to understand individual words and phrases in the text (bottom up strategies), or they rely too extensively on the use of their previously acquired background knowledge to get the general gist of the text (top-down strategies). In the first case, students develop a fragmented view of low level information gleaned from the text and in the second highly idiosyncratic interpretation of the possible meaning of the text. In either case, they ultimately fail to arrive at a coherent, accurate view of the text's meaning. To be successful readers, students need to be able to use bi-directional text processing strategies to attend to the factual information presented in the text while developing, at the same time, a model of its overall meaning.

Gemini includes procedures to model appropriate bi-directional text processing strategies in order to direct students' attention to macro-level information (the development of the general theme of a story) and micro-level information (important textual details related to that general theme). The authoring system features tools to devise macro-level questions to verify students' comprehension of the evolution of the major idea/s of the story and micro-level questions to confirm their understanding of the language used to convey those ideas. It also supports the creation of a variety of prompting devices and help screens to emphasize macro-level information (e.g., discourse markers and anaphoric expressions) and to underscore micro-level information (e.g., salient vocabulary expressions and syntactic structures). Gemini's prompting devices include links to digital audio, digital video, analog

video, and graphic files, while its help screens include two sets of generic help screens, a set of video-based help screens, custom- made dictionaries, and student notepads. The combined effect of the use of appropriate questioning techniques supported by pertinent pedagogical scaffolding results in lesson designs which guide students to acquire effective bi-directional reading strategies.

C. <u>Comprehenders' recognition of the logical relationship among the text's narrative components plays an important role in higher order text processing.</u>

Knowledge of the logical structure of a text helps readers to organize information derived from the text into larger "chunks" and facilitates their development of a coherent view of the text's overall meaning. This knowledge plays a central role in higher order text processing as readers integrate newly processed information into their evolving mental representation of the text's meaning. If students are not able to relate larger narrative components to each other in some rational manner, they will ultimately possess only a disjoined view of the text's meaning. Successful foreign language readers need to be able to understand the logical relationships among a text's narrative components in order to develop a complete understanding of its meaning.

Gemini contains tools to create icon-buttons to represent the narrative components of a text and to arrange those icon-buttons in schematic displays indicating the logical relationships among the narrative components. This resulting "text map" is one of the most important advance organizers in student lessons; it serves not only as an analytic display of the structure of the text but also as an organizing principle for students' use of the lesson. After students complete a particular segment of the text, the program returns them to the text map display before they proceed to the next segment. Using the text map as a pre-task organizer as an in-task point of reference in this way provides continuous guidance to students in higher order text processing as they work their way through a lesson.

4.2. Development and Publication of Specialized Material for Use in Foreign Languages, Area Studies, and other International Fields.

The faculty authors at five institutions have used the Gemini authoring system to develop reading lessons in the nine commonly and less commonly taught foreign languages mentioned earlier. The lessons have been nationally distributed by means of publishers' established marketing strategies and electronically via the Internet. The combined effect of Gemini's clear instructional focus, the project rigorous evaluation of the individual reading lessons, and publishers' peer view procedures have, in my opinion, insured that the lessons meet the highest standard of instructional quality.

It is a commonplace in CALL to describe the value of the computer as a patient tutor in highly individualized learning situations. Gemini's instructional features not only enable faculty authors to create such learning situations for students but also supports their development of pedagogical rich learning environment designed especially to increase

students' reading proficiency. The lesson contains: (1) displays of dynamic advance organizers to prepare students for reading, (2) presentation of reading texts in electronic format with hyperactive links to put salient textual information into relief, (3) attention-getting prompts built into the text to explicate important lexical and syntactic expressions, (4) button linked to on-line help screens to provide cultural and literary commentary, and (5) series of bi-directional comprehension questions to verify students' understanding. This comprehensive lesson design models effective reading strategies for students and direct them to use these strategies appropriately. As a result of this kind of lesson design, students are able to process information from the text much more effectively and quickly than in traditional instructional formats.

To cite one common example, most students make poor use of foreign language dictionaries to try to find the meaning of unknown words or phrases they encounter in a reading passage. If students bother to use a dictionary at all, they tend to accept the first meaning from a long list of possible meanings for a given word, essentially disregarding the context of the use of the word in the passage. Such ineffectual use of a dictionary requires an inordinate amount of time, distracts students' attention from the task at hand, and, most important, frequently leads to serious misinterpretation of the passage. In a well designed computer-based reading lesson, students need only to click on a hyperactive word to find its precise meaning within the text of the passage or click on a "Help" button to do an automated search for the word's meaning in a customized electronic dictionary. Students' use of such instructional features-plus the others listed in the paragraph above- will significantly facilitate their development of increased reading proficiency, which, in turn, enables them to do substantially to their reading base and to attain even greater proficiency in the foreign language.

5. The Current State of Authoring Systems

The profession has long struggled with the task of devising well defined authoring systems, but has not been able to develop an adequate conceptual framework complete with appropriate pedagogical components. A number of authoring systems are currently available in the profession, all of which suffer from either a lack of clearly defined instructional focus or a failure to include essential pedagogical components. An authoring system such as *Dasher*, for example, allows faculty authors to create fill-in-the-blank and sentence completion type exercises with predefined correct answers, but it does not focus students' attention on the acquisition of specific language skills. Faculty authors can use it to create a large number of exercises quickly, but not to develop lessons focusing on specific skill areas such as reading or listening.

Authoring systems such as *Guided Reading*, on the other hand, focus on a specific language skill but do not provide a coherent, complete methodological framework for the acquisition of that skill. The other authoring system, *WinCALIS*, permits faculty authors to incorporate multimedia materials into lessons in a fairly straightforward way. However, once

again, *WinCALIS* is designed essentially as drill-and-practice authoring system and does not easily lend itself to helping students acquire specific language skills.

Dartmouth College has developed a system called *SuperMacLang*. It supports the use of multimedia materials in lessons, but includes very few provisions for students help screens and requires the use of other programs to incorporate multimedia materials in lessons, resulting in cluttered screen displays. Purdue University produced an authoring system named *CALET*. It allows faculty authors to create several question types. This authoring system is designed primarily to reinforce the grammatical structures and vocabulary items taught in classes at that institution. Unfortunately, its highly idiosyncratic authoring design and narrow instructional focus are not easily generalizable to other language situations.

GALT, a newly published program for IBM-compatibles designed specifically for reading comprehension, holds considerable promise as an authoring system. It offers a unified approach to using multimedia materials to annotate written texts and includes carefully thought out pedagogical features to assist students as they work their way through lessons. Unfortunately, *GALT* does not include any question formats to verify students' comprehension. *GALT*'s clear instructional focus and pedagogical features do offer an excellent foundation for the development of a complete authoring system.

6. Conclusions

All of the authoring systems discussed above support the use of at least some form of multimedia materials. Four of the programs (*Dasher*, *WinCALIS*, *SuperMacLang*, and *CALM*) contain question formats for drill-and-practice exercises. Five of the programs (*WinCALIS*, *CALM*, *Guided Reading*, *GALT*, and *Gemini*) include procedures to create hyperactive text sequences, but only two (*GALT* and *Gemini*) offer several different kinds of help screens. The same two are also the only ones to offer any substantial degree of flexibility in lesson design without having to write computer code. Three of the programs *(Guided Reading, GALT, and Gemini)* focus specifically on presenting and annotating written texts, but only *Gemini* includes comprehension questions to confirm students' understanding of texts. Finally, *Gemini* alone can create links to remote sites on the internet and converts stand-alone lessons into HTML documents for use via the internet. It offers a unified authoring package with a clear instructional focus on reading comprehension in a "what-the-author-sees-is-what-the-student-gets" authoring environment. It enables faculty authors to develop rich learning environments replete with appropriately designed comprehension questions and a variety of pedagogically relevant help screens.

The future of technology in language learning is becoming the present more rapidly than the profession can assimilate the currently available materials. Video offers the opportunity to present language in its cultural context, underscoring the most important contribution technology can make in language teaching, which is the integration of teaching language and culture. The addition of computer-mediated technology allows further

integration of language, literature, and culture. Arabic Gemini is the manifestation of such statement.

Mohammed Jiyad, Ph.D.
Email: mjiyad@hotmail.com
Website: www.mtholyoke.edu/courses/mjiyad

References:

Alatis, J. E. (Ed.) *Georgetown University Round Table on Languages and Linguistics* 1992. Washington, DC: Georgetown University Press.

Beauvois, M. H. "Computer-Assisted Classroom Discussion in the Foreign Language Classroom: Conversation in Slow Motion." *Foreign Language Annals 25* (1992): 455-464.

Brown, H. D. *Principles of Language Learning and Teaching.* Englewood Cliffs, NJ: Prentice Hall, 1987.

Byrnes, H. "Teaching Toward Proficiency: The Receptive Skills." In A. C. Omaggio (Ed.), *Proficiency, Curriculum, Articulation: The Ties That Bind.* Middlebury, VT: Northeast Conference on Teaching Foreign Languages, 1985.

Carrell, P. L. "Content and formal Schemata in ESL Reading." *TESOL Quarterly*, 21 (3), 467-481), 1987.

Chastain, K. *Developing Second Language Skills-Theory and Practice.* San Diego, CA: Harcourt Brace Jovanovich, 1988.

Freeman, Y. and D. Freeman. *Whole Language for Second Language Learning.* Portsmouth, NH: Heinemann Educational Books, 1992.

Freiberg, H. J., and A. Driscoll. *Universal Teaching Strategies.* Boston: Allyn and Bacon, 1992.

Garrett, N. "Technology in the Service of Language Learning: Trends and Issues." *Modern Language Journal 75* (1991): 74-101.

Gass, S. M. & C. G. Madden (Eds.) *Input In Second Language Acquisition.* Rowley, MA: Newbury House, 1985.

Grellet, R. *Developing Reading Skills. A Practical Guide to Reading Comprehension Exercises.* Cambridge: Cambridge University Press, 1981.

Kelly, L. G. *25 Centuries of Language Teaching.* Rowley, MA: Newbury House, 1969.

Krashen, S. *Principles and Practice in Second Language Acquisition.* New York: Pregamon Press, 1982.

Krashen, S. *Input in Second Language Acquisition.* Oxford: Pregamon Press, 1985.

Krashen, S. D. & T. Terrell. *The Natural Approach.* San Francisco: Alemany Press, 1983.

McLaughlin, B. *Theories of Second-Language Learning.* London: Edward Arnold, 1987.

Omaggio, A. C. *Teaching Language in Context.* Boston, MA: Heinle & Henile, 1986.

Rivers, W. *Communicating Naturally in a Second Language.* Chicago: University of Chicago Press, 1983.

Rivers, W. "A New Curriculum For New Purpose.:" *Foreign Language Annals* 18 (985). 37-43.

Rivers, W. *Interactive Language Teaching.* Cambridge University Press, 1988.

Rogers, M. "MTV, IBM, Tennyson and You." *Newsweek* (Fall/Winter 1992): 50-52.

Swaffar, J., K. Arens, and H. Byrnes. *Reading for Meaning.* Englewood Cliffs, NJ: Prentice Hall, 1991.