
Technology and the Teaching of Literature

Understanding the uses and ramifications of technology is one of the foremost tasks facing today's teachers. The task is a particularly challenging one for teachers of English (and other languages) due to the seemingly divergent natures of language and technology. For those who teach English as language, the job is made easier by the impressive body of academic research and discussion available in the professional literature, conferences, and meetings. Those who teach English as literature, however, are not so fortunate. In this article, the author attempts to redress that imbalance, first by briefly reviewing current attitudes toward the use of technology in education, and then by exploring the conditions under which technology is applied to literary study.

Vortex of Uncertainty

These are not easy times for teachers. Budgets are tight, good jobs are hard to find and harder to keep, students are entering college more ill-equipped for the rigors of university study than ever before, and public education is coming under increasingly harsh criticism from various segments of society, placing teachers in a vortex of uncertainty and vulnerability.

Juxtaposed against this difficult backdrop is a complication of a very different kind: the constantly growing influence of technology in education. While more and more teachers are embracing, or at least accepting, the advent of the electronic classroom and the new world of high-tech teaching, many are still struggling to understand or cope with the electronic revolution that is sweeping across the corridors of academe.

For all its undeniable benefits in the educational context, technology is also creating two troublesome conditions: 1) a sense of confusion among teachers not on the cutting edge

of electronic innovation; and 2) a growing chasm between teachers who do and teachers who don't engage technological means to achieve pedagogical objectives. As Leech & Candlin (1986) put it, "Already one can sense, in overheard conversations, that the battle lines are being drawn up between technophiles and luddites" (p.xi). Halpern & Liggett (1984) portray an educational world in which there are "two dramatically different responses to the new technology: repulsion and attraction." (p. 1).

Amidst the furor of the debate over the pros and cons of educational technology, some scholars have offered helpful practical assessments aimed at bridging the gaps between the opposing camps. Lindenau (1984) provides a succinct summary of the situation all teachers, regardless of their attitude toward technology, are facing:

Learning is taking place electronically, and more of what we know, store, and recall in the future will come to us from electronic sources. Like it or not, we are all in the midst of a microelectronic revolution. The time is fast approaching when society will be so integrally hooked into technology at home, at school, and at the office that those of us unwilling or unable to use the new technologies will be equivalent of people today who cannot read or write, namely functional illiterates. (p. 119)

Lindenau's view suggests a grim, 'do or die' scenario described in the following terms by Adams & Hamm (1987):

There is a tendency for teachers to cling to print as their exclusive medium of instruction. As the world moves to incorporate the wonder of new electronic media (ranging from computers to video production), the school could easily be left behind as our prime educational institution. To stay vital and involved in the future,

schools must connect themselves to the technology operating around them. This involves infusing elements of both technology and visual literacy into our old curriculum models. (p.30)

Williams (1986) offers this additional perspective:

In the next decade, microcomputers will stimulate radical changes in every part of the educational system. This potential has already been recognized and exploited in other fields—schools will not so much be moving with the times as running to catch up. (pp. 145-146)

Magnitude of Educational Technology

There is nothing new about technology imparting an influence on education. Indeed, education has evolved in many ways precisely because of the numerous innovations technology has supplied to generation after generation of educationalists. However, the technology dominating today's educational world operates on a substantially higher scale than anything faced by teachers in the past. As Phillips (1986) notes, "For in the educational applications of information technology, that is the convergence of computers and communications, we see the emergence of a technology which is even now an order of magnitude more powerful than any teaching aids we have been accustomed to hitherto." (p. 3).

The 'powerful magnitude' of today's technology serves as both a boon and a curse to those who encourage further integration of technology into the educational process. This is particularly true with respect to the current rage, namely microcomputers, which have progressed at an astonishing rate in recent years. On the one hand, sophisticated microcomputer technology, readily available at modest cost, can now be found in offices of educators who previously had never dabbled in educational technology. On the other hand, microcomputer technology has pushed to the forefront certain growing doubts about the wisdom and propriety of allowing machines to do work some perceive as the unique and special domain of human beings. This has sparked a widespread and sometimes acrimonious

examination of educational technology which intensifies in direct proportion to the increased sophistication and power of the microcomputer technology at hand.

Reactions to Educational Technology

On the plus side, the microcomputer revolution has caused deep excitement and inspired renewed commitment and interest among teachers and researchers to improve the quality or broaden the scope of their work. This, in turn, has made possible a host of teaching and research strategies and methodologies that have transformed the world of education into a far more efficient and promising entity. Specifically, jobs that were once tedious and time consuming are now done more quickly, liberating academics to be more productive while at the same time making their work more enjoyable.

On the minus side, the relatively sudden appearance of a cornucopia of exciting possibilities generated by technological innovation has fueled a 'too much too soon' syndrome—a syndrome proportionately epidemic, hard to cure, and manifested in two forms.

First, the presence of so much attractively packaged and heavily hyped technology has created high expectations that in many cases have not been met—expectations that have left a sour aftertaste in the mouths of teachers who took what looked like a promising bite. As Hill (1982) observes:

Use of the term 'educational technology' more often provokes anger and concern among teachers who have suffered from recalcitrant language laboratories, incompatible video recorders, incomprehensible computer programs, or intricate film-lacing systems. At a time when the micro-chip revolution is poised to change our domestic, commercial and industrial lives, there is a marked disenchantment among educationalists towards technological innovation. (p. 142)

Second, the abundance of technological hardware and software within what seems like an impossibly short period of time has instigated a

backlash of fear and defensiveness. In a discussion of computer technology and language instruction, Kenning & Kenning (1983) note this negative reaction among language teachers:

We are afraid that it may come to dominate us; we have qualms about dehumanization in a subject which is concerned above all with human communication, and we even may be afraid of losing our jobs. (p. 1)

Spitzer (1987) identifies a different kind of concern, namely the absence of meaningful leadership in the midst of educational technology's increasing involvement in teaching and learning. He asks: "Who is in charge? Who is providing direction for educational innovations?" (p. 19)

Technology and English Teachers

The relationship between technology and teachers of English is an especially complicated one. While teachers in other disciplines may sometimes feel uncomfortable toward technology, they generally do not perceive it as the antithesis of the subject they teach; English teachers often do. To them, technology just doesn't mesh with their self-defined role as, in Townsend's (1987) words, "preservers of language and culture." (p. 41)

English teachers who resist or shun technology do so for reasons beyond a fundamental distaste for or philosophical objection to technological teaching aids. History is another important factor. For example, many language teachers are still smarting over the failure of the language laboratory to perform the wonders its proponents promised. After seeing how the language laboratory was "sold," teachers have learned to be wary of sales campaigns boosting other technological miracles. Quite simply, they have seen it all before in other contexts, as Stern (1983) points out:

The rapid turnover of ideas on language teaching, the long history of the method battles, the so-called discoveries and 'breakthroughs' and the subsequent disenchantment, all form a sad but telling cavalcade of theorizing through the ages. Understandably, experienced language

teachers have become skeptical of 'new' theories, method reforms, and other innovation. (p. 24)

The recent avalanche of English teachers moonlighting as software salespeople has heightened the skepticism to which Stern referred. These "academics turned entrepreneurs" (Maddux & Cummings, 1987, p. 32) design and market their own computer software with the dogged persistence of a politician out hustling in search of votes. The more they appear hauling their latest programs in tow, the more other teachers take heed of Leech and Candlin's (1986) warning to be on guard against "a self-promotive avantgarde" using computer-assisted language learning (CALL) programs as "fashionable instruments" to further their own ends (p. 1). In the process, many teachers develop a reaction against technology itself, particularly since the product being marketed by the 'entrepreneur' is often of minimal effectiveness even under the best of circumstances. These academic salespeople tend to give the product—which deserves objective and thorough scrutiny—a bad name.

Reactions to Computer Assisted Language Learning

The intense marketing of CALL and Computer-Assisted Instruction (CAI)—without substantial evidence of its classroom effectiveness—has highlighted the debate over educational technology in general. While many teachers have been willing to explore CALL and CAI, both teachers and linguists find themselves in a situation described by Thomas (1986) as follows: "Classroom language teachers and applied linguists alike are expressing serious doubts about the pedagogical value of CALL programs" (p. 113). Dunkel (1987) concurs: "Teacher skepticism concerning the efficacy of CALL is pervasive." (p. 252)

Technology and the Spheres of English Teaching

Technology touches the field of English teaching in two spheres: 1) **English language teaching and technology** which has been briefly discussed

and is currently receiving enormous amounts of attention in professional circles; and, 2) **English literature teaching and technology** which has received comparatively little attention to date in professional forums. Such lack of attention is unfortunate for two major reasons. First, it is unfortunate because the bulk of English teaching at the university level is in the sphere of literature; as such, there is a need to understand the relationship between technology and this kind of teaching. Second, the lack of attention is unfortunate because the issue of technology—the circumstances surrounding its use and specific applications of it—point to important questions about the place of technology in the humanities. The remainder of this article will focus on the circumstances surrounding technology and its specific applications in the teaching of literature.

The Nature of Literary Study

Before examining the use of technology in the teaching of literature, it is necessary to briefly review the nature of literary study in order to understand the specific conditions under which technology operates when it is applied to the teaching of literature.

By common agreement, literature is language in its most sophisticated form. Regardless of genre employed by the author of a literary work, the language of the text must be so shaped as to fit a complex host of literary and linguistic functions particularly suited to literary expression (e.g., the use of imagery, point of view, etc.). Unlike other forms of written discourse, literature does not aim above all else at being functionally communicative; instead of imparting information or striving to ensure a fundamental level of understanding, literature attempts to *move* readers at deeper levels of their awareness. Such a goal requires not only that the author or writer manipulate language in specialized ways, but it also requires that readers must enter the text in a manner far different than, say, that of reading a newspaper, a restaurant menu, or a letter from an insurance company. Reeves (1986) describes this situation as follows:

No literary work can succeed unless it engages the reader's imagination, or his

emotions or his intellect. Most involve all three. Some few aim at only one. Thus literature may reasonably be said to rest in the final analysis on engagement. Engagement, the attempt to stimulate us into action, to persuade us to embrace a cause, may be one result or manifestation of this effect, but only one. The simplest and, as Lessing realized, most fundamental form that literary engagement can take is identification. Identification requires an act of imagination; it affects us emotionally and it will almost certainly exercise our intellect as we wrestle alongside the protagonist or author with the situations and problems presented. Our mind engages the work much as wheels engage a transmission system. (pp. 14-15)

Above all else, then, literature is an imaginative act, both for the writer and the reader. This places it in stark contrast to other forms of written expression. Literature requires readers to see with their mind's eye the fictional world constructed by the author. Although a requirement, such engagement is also a source of joy to be found in reading a literary work. Converting the writer's words into imaginative constructs which are enriched by the reader's own experiences, awareness, and inner needs makes the reading of literature a powerful, moving act not normally associated with other forms of written discourse.

Electronically Shaped Experiences of Today's Students

Literary study stands in dramatic opposition to life in the information-laden world recent generations of readers have experienced from birth. We live in an age of electronically processed information, and many of our students have never known a world without this information overload. Our student's exposure to television, in particular, has conditioned them to engage literary texts in substantially different ways than their pre-television era counterparts. Today's students, thanks to contemporary electronic media, have quite simply *seen* far more than pre-1950s students. Having seen more as the result of the electronic media, today's students have little left for imaginative creativeness.

Contemporary, technology-laden reality bears heavily on the teaching of literature because it has already shaped the experiences of our students in its own electronic image.

Who can doubt that today's teachers of literature are approaching their pedagogy under vastly altered conditions than, say, those experienced by teachers in the first half of this century? If the teaching of literature is to be successful in today's high-tech age, a completely different set of interlocking variables must be taken into account; these variables are all connected in one way or another to the extraordinary expansion and nature of technology. These overlapping variables include the following:

- 1) Students whose reading skills are considerably lower than in the past.
- 2) Students who have, for the most part, experienced less contact time with the written word than previous generations of students.
- 3) Students who have grown up in a visually oriented rather than a print oriented environment.
- 4) Students whose attention is the object of an intensely direct competition which pits literature against television, with the latter holding a clear advantage, since after years of exposure to it, young people are addicted to the superficial, passive stimulation it provides.
- 5) Students who live in a world rife with the commonly held perception that knowledge of literature is of minimal or no value when contemporary reality is connected to or expressed by the electronic media.

Complexities Literature Teachers Confront

Teaching literature to students with backgrounds created by the overlapping variables described is at best a formidable task and at worst impossible to achieve. Bretz & Persin (1987) describe the complexities facing teachers of literature as follows:

Since it is no longer reasonable to count on a backlog of reading experience in our students, given that the bulk of their leisure is now occupied by television, video games,

computers, and other media of a passive, receptive nature, teachers of literature on both the high school and the college levels need to instruct students in the various strategies involved in deciphering a text. (p. 165)

In short, today's students do not read. As a result, they lack the fundamental abilities necessary to engage a literary text on any meaningful level. Not only will most of them have to be shown how to 'decipher a text,' but they will require basic instruction in the very concept of working with a text since electronic media often in the process of presenting content to them also interpret it for them. Television, particularly, requires little deciphering given its generally simplistic offerings.

Reeves (1986) provides further observations about the complexities today's literature teachers face:

Do we live in an unliterary age? Much has been written on the influence of television on young minds, but one thing is certain: books no longer enjoy a monopoly as a source of information. On the contrary, television is almost certainly the primary source of information for a majority... Another effect of the huge advances made in electronic technology has been the emphasis on images in our culture. Film, television, video, and advertising subject us to a greater impact of images than we receive from words. (p.13)

The net result of the situation Reeves describes is that today's students encountering literature do so with strikingly different needs than previous generations of students. As for the needs themselves, they are electronically defined, placing them in direct contrast to the imaginative and speculative nature of literary texts. Literature teachers who fail, or refuse, to recognize the technologically rooted needs of today's students are doomed to fail in the task of making the reading of literature a meaningful experience. This point of view is echoed by Kramsch (1985): "Discussion of a literary text will fail to meet the interests and comprehension needs of the students if it is totally irrelevant to what they have in mind." (p. 360)

For better or worse, what students have in mind is determined by the massive input of technologically shaped information, particularly the images presented in the 3-5 minute long rock music videos so popular today. Students who feed heavily on a steady diet of such images may well seek the same kind of stimulation in a literary text: lightning quick plots, superficial thematic content, and conflicts that are resolved without ambiguity.

Fast Forwarding Through Fielding

Jay Boyer (1987) points out the parameters of the problem confronting literature teachers when he contrasts the viewing of a videotape presentation of a literary work with the reading of the text. Viewers have an array of buttons at their fingertips with which to control the video technology. If used indiscriminantly, these buttons can disrupt the flow and even interfere with the deeper meaning of the subtle layers of the story. Boyer describes the problem as follows:

I feel I'm in safe hands when reading Fielding. Think of the design of *Tom Jones*—18 books long, six set in Somersetshire at the estate of Squire Allworthy, the second six in London itself, each appropriate to a stage in Tom's maturation. Fielding might just as well have been creating a ratchet wheel, his sense of irreversible forward movement is so absolute. But I wonder if I'd take the same pleasure in such things if I were as adept as my young friend is with our remote control unit. You can't fast forward through Fielding. An episode that seems to stand on its own is actually there to move you forward to the next one. And you'd better stay away from the mute button. Some of the characters are minor, but they can't go unheard. Lawyer Dowling for one, is giving us hints of Tom's true biography throughout, information that only he and a handful of others know. (p. 62)

Boyer's assertion that "you can't fast forward through Fielding" takes us to the heart of the conflict between technology and the teaching of literature. First, literary texts are meant to be read with an ever-alert eye for detail, for the ebb and

flow of the story, for subtle aspects of characterization and theme—all of which are embodied in the text. Only a careful reading of the text would produce a true appreciation of these vital elements which make literature the deeply moving type of discourse it is for those who love to read.

Second, today's students, schooled in technology and accustomed to experiences shaped by electronic means, are predisposed to encounter literature in the manner Boyer ascribed to his young friend watching the video version of *Tom Jones*. That is, the novel is likely to be viewed piecemeal as the viewer succumbs to the various buttons which allow him or her to control the perception of content. 'Slow' sections of the story are passed over with a push of a button or the flip of a switch, as is any other aspect of the story judged unattractive or unappealing by the viewer.

What we, therefore, encounter are two diametrically opposed approaches to literature. Given the immense disparity between the two, what is the proper role of technology in the teaching of literature?

On the one hand, technology and literature appear to be mutually exclusive, possessing inherently different relationships to their audiences. Literature must be read, meaning that the audience must be actively involved in engaging the text. In contrast, technology places the audience in a passive position. Whereas literature tends to be interpretive in nature, technology usually communicates on a didactic level in which information and ideas are presented in a straightforward, unambiguous format.

On the other hand, teachers of literature cannot ignore that students have their roots deeply planted in technology. To deny this reality is to shortchange students in their experience of literature and shortchange literature by keeping it beyond the reach of students.

However, accepting the technologically conditioned reality of today's students is not simply a matter of acknowledging that the situation exists. Instead, literature teachers must confront the question "To what degree should technology be incorporated into the teaching of literary texts?"

Technological Applications in Teaching of Literature

The familiarity of students with electronic media can be exploited in the direction of literature. By starting with the premise that today's students enjoy and are comfortable working within the technological framework, teachers of literature can seek out the positive links between technology and literature. This point is stressed by Hester (1972) who believes that "certain audio-visual supplements enhance and heighten the literary reality experienced by the reader-learner" (p. 288).

The ample supply and variety of commercially marketed videotapes and the video cassette recorder (VCR) are the doors of opportunity envisioned by Hester. With video technology, students today can watch—at home or in the classroom—the film version of novels like Thomas Hardy's *Tess of the d'Urbervilles*, a work quite foreign to contemporary readers because of its setting in rural England during the Victorian period. Unable to imagine such a setting, students can see a vivid representation of the setting of Hardy's fictional world, albeit another person's imaginative creation based on Hardy's words, namely the director or producer of the film. When it comes to filmed versions of literary works as a way to bring to life a setting that otherwise would be inaccessible to students not adept at imaginative construction, we might well ask "Are we not trying to cure an itch by itching?" Yes, we are, but may it not be the better part of valor to try to facilitate the process of imaginative construction through something familiar to students (video images) rather than something foreign to them (imaginative construction by means of deciphering the text)?

Microcomputers have introduced new dimensions to the technologically based study of literature as well. Evans (1985) advocates the use of such technology in writing exercises specifically designed for the study of literature. Ross (1985) encourages the use of computer software to conduct stylistic analyses of literary texts, thereby opening up intriguing possibilities for effective linguistic study of literature.

Today's electronic media are very much individually based and can be experienced on the

user's own terms. Students and teachers alike can stop and start, rewind and fast forward, freeze frame, shuttle search, etc. It is this individual accessibility and control of technology that, under certain circumstances, perform Hester's function of heightening the student's literary awareness.

Drawbacks of Technology in Teaching Literature

When the relationship of technology and literature is one of complementation or supplementation to augment aspects of the literary texts in order to help begin the process of imaginative construction, technology has a number of very appealing advantages for teachers and students of literature. The disadvantages of technology in the teaching of literature revolve around the fact that in many cases it *replaces* literary texts rather than augmenting them; and in many instances, technological experience of literature as opposed to reading experience of literature becomes the experience of choice. Why spend hours struggling with *Tess of the d'Urbervilles* when the bare essentials can be acquired quickly and passively by watching a video version of it? Why struggle with deciphering the text and imaginative construction? How can the written version of 'Tess' compete with the beautifully photographed film/video of the novel? Having seen Nastassia Kinsky as Tess, will technologically oriented students be able to ever visualize the character in any other terms? Can they ever read the novel without being influenced by the visual portrayal in the film version? Will not every electronic version of 'Tess' or any other novel be forever second hand, namely someone else's imaginative construction of it? How else can anyone ever have a first hand version of a novel except if he or she deciphers the text and imaginatively creates it in his or her own mind? Electronic versions of great literature eliminate its greatness, that is, they erase the power of the written word to set into motion the unique, personal imaginative engagement of the reader. Nastassia Kinsky may be the penultimate Tess, but she was created not by the viewer but by the those who made the film. She is not the unique creation of an engaged reader, but rather the canned image of a passive viewer.

Conclusion

All teachers face students whose fundamental ties to the world are embedded in technological umbilical cords. Language teachers do not view the teaching of language as an imaginatively based process but rather a process that is largely if not entirely skill-based. Hence, technology can be used effectively to facilitate the drill-and-practice aspects of language acquisition. Literature teachers, on the other hand, face the realities of teaching a process that is imaginatively based, and although there is a certain amount of skill acquisition in the study of literature, literature teachers do not teach skills in the usual sense of the term. Rather, they are attempting to sharpen students' perceptive abilities along highly subjective lines. They are trying to arouse students' imagination in such a way that it can enter and meaningfully engage a world that doesn't exist.

We could simply conclude that literature and technology are worlds apart and ban technology from the classroom. We could, but that would not alter the fact that our students are intrinsically predisposed to technology. Furthermore, technology is not going to disappear, and its encroachment on what for some is hallowed literary territory will spread. So, where does that leave teachers of literature?

Hester (1984) argues that literature teachers have no choice but to take on a "partial role of technician and organizer" (p. 290) if literature is to be taught under contemporary conditions.

Lindenau (1984), commenting on a broader scale, offers this advice:

No one can isolate the learner from the electronic learning age that is here to stay. What we in the humanities and the arts must do is make sure that technology is not the only reality learners experience, that human experiences are scheduled into the learning process, and that teachers provide the one essential quality in any learning, namely human interaction. (p. 122)

Do those of us who teach literature wish to become the partial technicians Hester propose? Is that why we set out to teach literature? On the other hand, do we have much choice in the matter

when our students are themselves technicians hooked into the glittering world of electronic media that has fed them since birth? Can literature, given its foundation in human experience and interaction, fulfill Lindenau's injunction to include a human element in the world of technologically based teaching?

These are difficult questions with no solid answers yet. What *is* important is to begin considering these questions seriously in professional circles. It is time that the relationship between technology and the teaching of literature receive the attention it deserves.

In the meantime, those of us who teach literature now are confronting the questions about technology and literature on a daily basis. What can we do? Perhaps, a wise course of action is the one recommended by Pierson (1987) for the use of microcomputers in language teaching: "enthusiasm and restraint." That is, through a judicious use of technology, students may be able to experience literature in familiar terms while teachers preserve the integrity and artistry of literature.

We cannot make technology go away, desirable as that might be, but we can try to channel its influence and applications in ways that celebrate the essence of literature and the art of reading. Finding the proper balance between technology and literature, rather than completely embracing or blindly rejecting technological realities, is the challenge facing responsible teachers of literature.

References

- Adams, D.M. & Hamm, M. (1987). Teaching students critical viewing skills. *Curriculum Review*, 26(3), pp. 29-31.
- Boyer, J. (1987). If Bach had owned a computer: Technology and teaching the novel. *English Journal*, 76(1), pp. 58-63.
- Bretz, M.L. & Persin, M. (1987). The application of critical theory to literature at the introductory level: A working model for teacher preparation. *Modern Language Journal*, 71(2), pp. 165-170.
- Dunkel, P.A. (1987). Computer-assisted instruction (CAI) and computer-assisted language learning (CALL): Past dilemmas and future prospects for audible CALL. *Modern Language Journal*, 71(3), pp. 250-260.
- Evans, J.F. (1985). Teaching literature using word processing. In Collins, J.L. & Sommers, E.A. (Eds.). *Writing On-Line* (pp. 83-88). New Jersey: Boynton/Cook.
- Halpern, J.W. & Ligget, S. (1984). *Computers & composing: How the new technologies are changing writing*. Illinois: Southern Illinois University Press.
- Hester, R.M. (1972). From reading to the reading of literature. *Modern Language Journal*, 56(5), pp. 284-291.

- Hill, B. (1982). Some applications of media technology to the teaching and learning of languages. In Kinsella, V. (Ed.). *Surveys 2: eight state-of-the-art articles on key areas in language teaching* (pp. 142-156). Cambridge: Cambridge University Press.
- Kenning, M.J. & Kenning, M.M. (1983). *An introduction to computer assisted language teaching*. Oxford: Oxford University Press.
- Kramsch, C. (1985). Literary texts in the classroom: A discourse. *Modern Language Journal*, 69(4), pp. 356-366.
- Leech, G. & Candlin, C.N. (Eds.). (1986). *Computers in English language teaching and research*. London: Longman.
- Lindenau, S.E. (1984). The teacher and technology in the humanities and the arts. *Modern Language Journal*, 68(2), pp. 119-124.
- Maddux, C.D. & Cummings, R.E. (1987). Educational computing: A new look at the problem of ethics. *Educational Technology*, 27(11), pp. 31-32.
- Phillips, M. (1986). CALL in its educational context. In Leech, G. & Candlin, C.N. (Eds.). *Computers in English language teaching and research* (pp. 2-10). London: Longman.
- Pierson, H. (1987). The integration of word-processing in ESL: Enthusiasm and restraint. Unpublished manuscript: The Chinese University of Hong Kong.
- Reeves, N. (1986). The uses of literatures. *The Linguist* 25(1), pp. 12-17.
- Ross, D. (1985). Realities of computer analysis of compositions. In Collins, J.L. & Sommer, E.A. (Eds.). *Writing on-line* (pp. 105-113). New Jersey: Boynton/Cook.
- Spitzer, D.R. (1987). Why educational technology has failed. *Educational Technology*, 27(9), pp. 18-21.
- Stern, H.H. (1983). *Fundamental concepts of language teaching*. Oxford: Oxford University Press.
- Thomas, J. (1986). Adapting dBase II: The use of database management systems in English language teaching and research. In Leech, G. & Candlin, C.N. (Eds.). *Computers in English language teaching and research* (pp. 112-129). London: Longman.
- Townsend, R. (1987). How English teachers fall in love with computers. *Curriculum Review*, 26(3), pp. 41-43.
- Williams, D. (1986). The microcomputer revolution in reading. In Cashdan, A. (Ed.). *Literacy: Teaching and learning language skills* (pp. 145-161). Oxford: Basil Blackwell.

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