This annotated bibliography contains 61 different items, indexed by ERIC from 1985 to 1995, describing classroom practices in incorporating computers into the curriculum as recorded by secondary English teachers or classroom observers. The citations in the bibliography come from documents, journals, and texts. The bibliography is divided into 5 roles for the computer (as elaborated by B. C. Bruce in 1990) in the English classroom: a tutor; a tool (38 citations); a way to explore language; a medium; and an environment for communication. Some items are classified under more than one category. (CR)
Incorporating Educational Technology into the Secondary English Classroom: An Annotated Bibliography

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Abstract

Since 1984, NCTE has been identifying and evaluating the role of computers in the English classroom. The purpose of this survey is to determine how secondary English teachers are actually incorporating computers into their curriculum. Findings are based upon reports in documents, journals, and texts, describing classroom practices as recorded by secondary English teachers or classroom observers and indexed by ERIC over the last 10 years. It includes an annotated bibliography with articles categorized under the five roles for computers as identified by Bruce. Findings indicate that secondary English teachers use computers to assist in the composing process and to establish new means of communication.
In 1984 the NCTE Task Force on Excellence in Education voiced concern that computers were not being used to "advance excellence" in the English language arts but were being used for drill and the practice of low level skills "rather than for composing, thought processes, text analysis, and creative uses of language" (Oates 3). When the NCTE Instructional Technology Committee responded to these concerns in 1985, they agreed with the Task Force on two major issues: "1) The potential of computers in teaching writing and language arts has not been realized, and 2) the positive impact of computers in teaching English language arts may be immense and possibly revolutionary" (3). The Technology Committee acknowledged that they could not claim computers were being used ineffectively since so few English teachers were actually using them in their classrooms. They did, however, identify six priorities:

1. Uses of the micro in teaching the composing processes (planning, drafting, editing, publishing).
2. The uses of computer programs in editing (Writers' Workshop, et al).
3. The uses of computer programs to stimulate interactive responses for reading—nonfiction as well as fiction.
4. The qualifications of the instructor who teaches word processing within required "computer literacy" courses. (Are math and business education teachers competent?)
5. Recommended specifications for technology in today’s K-12 classroom.

6. The communication skills needed for competence in an information society. (5)

Five years after the Instructional Technology Committee presented their report, Bruce (1990) identified five roles or five ways computers might be used in the classroom.

1. A tutor. They can individualize instruction, provide learning material at a controlled pace, and record student progress.

2. A tool. It aids in reading; it allows students to produce and format texts easily; it facilitates revision of texts; it checks for spelling errors. It stores in a compact and easily accessible form all sorts of information that learners need, from style sheets to encyclopedic data.

3. A way to explore language. It makes the regularities, the beauties, and the difficulties of language something that students can examine and interact with in new ways.

4. A medium. It makes possible new modes of communication, and "hypertexts," or "hypermedia," which allows the intermixing of tables, charts, graphs, pictures, sounds, video, and text.

5. An environment for communication. It is a new social realm that permits new forms of meaningful communication and reconfigures the relationships among students and teachers. (p. 536)
Five more years have passed, and in 1995 the ERIC Clearinghouse on Reading, English, and Communication provides a source for analyzing the various ways computers have been incorporated into the classroom over the last ten years. The annotated bibliography which follows includes only those reports in documents, journals, and texts which describe actual classroom practices as recorded by secondary English teachers or observers in a secondary English classroom from 1985 through 1995. Each item is classified under one of the five roles for computers as identified by Bruce. Where more than one role is involved, the item is classified under the highest rating with additional roles being noted in the annotation.

Annotated Bibliography

Computers in the Secondary English Language Arts Classroom:
1985-1995

Documents

Level 1 Tutors


With only one computer in her classroom, Mabry assigns each student 30 minutes per month to work at the computer. Each student works on programs designed to teach grammar, and, with a variety of programs, she can meet the needs of both remedial and advanced students.
Level 2 A tool


The authors teach computer literacy to their classes; then students record a first draft of a literary response on paper, before recording it on a computer for revising and editing. The length of entries begins to grow when students see how brief their writing is when they print a hard copy. Once a week, a copy of all responses is used for class review.


High school students learn to access information from a university via telecommunications. (Levels 1 and 2)

Incorporating Educational Technology

Harris assigns various prewriting activities to prepare students for a literary analysis essay. As they work through the writing process, some students use computers for drafting and revising; all students use computers for publishing the final copy.


In an advanced English class, four interested students teach themselves word processing. Jackson finds that, if students already have mastery of editing and revising skills, they will edit and revise more often at a computer.


High school students learn how to access and retrieve information for research via telecommunications.

Joslin shares a plan for teaching word processing skills to middle school language arts students. A series of exercises teach seven skills: (1) retrieve file, (2) delete text, (3) insert text, (4) save file, (5) print file, (6) move text, and (7) composition and creation.


Lewin defines rewriting as giving attention to both content and mechanics and identifies this stage of the writing process as the most difficult to teach. Based upon his classroom experience, he claims that a combination of human response and computer programs is the most effective way to focus on rewriting and recommends specific software programs.


March conducted research in 7th and 8th grade classrooms to evaluate an interactive guided-writing program. Findings indicate the effectiveness of "structural chunking" and "on-line guides."

Marcus, S. (1986). Data bases 'r us. In S. Franklin, & J. Madian (Eds.), The writing notebook: Creative word processing in the classroom--November/December 1986, January/February 1987, and
MF.rcus explains the basic vocabulary associated with databases and identifies three database curriculum units which he created for the English classroom: Aesop, Fiction, and Papers.


Literary magazines and newspapers may be eliminated due to reductions in school budgets; therefore, Russo teaches his students to use the Apple Writer word processing program to compose and prepare the final copy in place of the traditional school publications.


While playing various adventure games on the computer, students take notes which they will use to write hints for solving the games. They may take notes with paper and pencil or at the computer.

When Stupple introduces her ninth grade class to word processing, they are particularly impressed with the ease of revision. She advises that the teacher be thoroughly familiar with the program and that the first activity be brief and require revision. She includes an outline of her lessons as a sample.


Swanson provides students with lesson objectives, skills and knowledge, materials, sources of information, terminology, and names of classmates who can assist in specific areas. They are assigned to complete one of seven letters on a word processor.

Thomas introduces students to computers and Bank Street Writer in a computer lab. In class, working with only one computer, they follow a sequence for writing and revising as suggested by R. Caplan in her text, *Showing Writing*.

**Level 3 A Way to Explore Language**


Bishop's students learn word processing skills, then work in pairs at computers to practice sentence combining activities. They write original paragraphs which reflect improved sentence length and variety.

**Level 4 A Medium**


High school students learn to compose a murder mystery by logging on to Mystery Writer on Learning Link, an on-line service.

Two groups of students in language arts and social studies, each group involving a diversity of cultures and abilities, use computers and cooperative learning strategies to enhance learning. Although the MacMagic group makes no significant gains in language growth, the researchers recommend additional research to investigate thinking skills, self esteem, socialization, and computer literacy. (Levels 2 and 4)

**Level 5: An Environment for Communication**


Students use paper and pen to draft their first letters to pen pals in another country; then they revise and edit at the computer. For the second letter, they enter brainstorming questions at the computer and use a copy of the questions as a basis for research. The authors plan to enter information from various pen pal countries in the form of an electronic almanac.

Middle school students learn how to write persuasive papers when students in other schools serve as peer editors and evaluators, using modems and communication software.


High school students create, edit and publish student writings from across the nation via telecommunications. (Levels 2 and 5)


Hune, inspired by Nancie Atwell, moves from a teacher-centered to a student-centered classroom, using a networked computer lab not only to encourage revision but also to foster collaborative learning.


Knighten teaches seventh graders to use computers; they compose, revise, send, and receive mail. She assigns lessons and
sends comments concerning their writing through the computer program. *(Levels 2 and 5)*


High school students exchange biographies for critiquing via telecommunications. *(Levels 2 and 5)*


Teachers collaborate to develop writing assignments, then exchange and evaluate work from each other's classes. Students learn to access data bases for information and to correspond via e-mail. *(Levels 2 and 5)*


Students from three high school English classes (one in Pennsylvania and two in Montana) correspond for one year via e-mail with the following outcomes: (1) Students learn to write in a variety of modes for varying audiences. (2) They recognize the need to discard stereotypes and learn about people from different cultures.
Journals

Level 1 A tutor

No citations

Level 2 A tool


Carter's eighth grade class decides to create a magazine for fifth graders, answering questions and offering advice in regard to making the transition to junior high school. They use a computer lab to compose articles and produce the final product.


The authors conduct research to examine the revision strategies used by eighth graders when composing at a computer. Students write two expository essays, one with paper and pencil, the other at the computer. The latter receive significantly higher evaluations.


Reissman describes two computer assignments which develop literacy skills while encouraging creative thinking and writing.

Level 3 A way to explore language

Hague and Mason introduce a class of tenth graders to Fry's Readability Graph and teach them, while using the computer, to raise the readability level of their own writing. Their "hidden agenda" is to involve students in revision at the surface structure level.

*Level 4 A medium*

No citations

*Level 5 An environment for communication*


Cohen and Riel, recognizing that the in-class writing of most students indicates little sense of audience, conduct an experiment to compare the writing of students to peers in another country with writing intended for teacher assessment. They use the Intercultural Learning Network to exchange papers with peers and find these papers to be significantly superior.


The researchers analyze the comments of college mentors as they correspond via telecommunications with ninth grade students in regard to their compositions. The mentors not only provide
suggestions for students but also expand their own understanding of the writing process.


Hamstra describes ways of incorporating *Aspects*, a groupware program, into middle and high school English classrooms. Computers are linked so that students in the same classroom or around the world can share ideas and information.


Wresh collects lesson plans from secondary English teachers who incorporate educational technology into their writing classes. He draws the following conclusions, based upon these plans: (1) Extensive computer equipment is not always required, (2) Computers can be used by all students, (3) Computers show the best sides of our students, and (4) Computers give access to the world. Each generalization is illustrated by classroom examples. *(Levels 2 and 5)*

**Books**

**Level 1** *A tutor*

No citations

**Level 2** *A tool*


Bowen's eighth graders work in groups of three to create an original myth. They enter their prewriting ideas on a computer
and continue working through the writing process to prepare the final product.


Deal and Beaver develop a list of questions to guide students while responding to *The Great Gatsby*. The questions alternate in calling for abstract concepts and concrete details. Students respond at the computer, using printouts and teacher comments to develop the final literary analysis.


In Chapter 10, Golub reviews procedures for writing, revising, and collaborating via computer.


Hackett incorporates a computer game and a word processing program into a writing assignment for a seventh grade class. Students work in groups of four or five to create a detective story.

Hackett's seventh grade students create, revise, and edit poems at the computer. They add graphics to highlight the poems which are printed and displayed in the library.


Hamilton's class collaborates to create a poem. They begin their work on individual computers, then move from one computer to the next, responding to prompts and revising and editing the final text for publication.


Hoppe's class use computers to complete a creative writing assignment in connection with the study of The Adventures of Huckleberry Finn. They write an "addition" to the novel, using dialogue with appropriate dialect. Computers enhance the revising and editing stages.


Jones works with a computer teacher who instructs her eighth grade English class in the programming skills required to complete their assignment. Each student creates a story with at least seven choices or branches, one of which has to be a logical conclusion.

LeRoy teaches non-college-bound seniors to collect information by conducting a database search. They work in pairs, each one investigating a different aspect of the same general topic. The final papers are placed in the vertical files in their school library.


Marcus describes various ways to use the invisible writing technique. The computer screen is turned off or the brightness turned down so that students are not distracted by words, arrangement, or mechanics during the early stages of the writing process.


Morics teaches middle school students how to create and publish an autobiographical newspaper. Students use a writing process approach on their computers to complete specific assignments and a graphics program to prepare the final product.

Neumann teaches a class of basic writers to use a word processing and a graphics program while working on a writing assignment—the mini-dictionary. Students select a topic of interest and, based upon library research, generate and define related terms. He finds that computers motivate reluctant writers and encourage them to revise.


Pederson uses computer warm-up activities to integrate the development of word processing and writing skills. He includes specific directions for 14 brief warmups.


After teaching word processing skills to his class, Rivard asks students to respond to a novel and to develop a character analysis. Students who use the computer for these assignments write longer responses and revise compositions more easily.


Ross teaches sixth-and-seventh grade students several fundamental journalistic concepts and then assigns the final project—an autobiographical newspaper. Ross provides the assignment and evaluation sheets.
Students in Sabastiana's class collaborate to create science fiction stories which are illustrated and printed, using a desktop publishing program.


Sadowski assigns a literary essay, and her class works with a variety of software programs to become aware of various revision strategies.


Schenkenberg uses a computer with a large classroom monitor to demonstrate how ideas are generated and organized for an assigned literary analysis. The class participates in brainstorming, selecting a thesis, and developing and organizing main ideas.


Schiple develops 36 journal entries which can be used to teach 12 critical thinking skills. Using the computer to record...
ideas, frees students from the fear of permanence associated with pen and paper compositions.


Two English teachers from different high schools arrange an exchange of computer disks which had been prepared by their students. Classes from the two high schools collaborate on three different activities.


Students in a high school composition class use computers to complete most of their work. As a result, they are more willing to revise and improve their papers, and Worman is able to produce an end-of-year publication of the best student writings.

**Level 3  A way to explore language**


Students experiment with and manipulate language while working in a computer lab on two poetry writing assignments.

Heyn's students complete a writing assignment at the computer where activities focus on language, analyzing and revising sentences and paragraphs.


Lucht asks juniors and seniors in an American literature course to use Ghostwriter, Sensible Grammar, and Writer's Helper to analyze the style of four authors: Hemingway, Fitzgerald, Steinbeck, and Faulkner. They analyze readability, sentence and paragraph length, sentence structure, writing "maturity," and vocabularity "maturity."

Level 4 A medium


Monroe and Hohman ask their basic English students to draw a picture of an important experience. They "draw" the picture on the computer, using SuperPaint, then talk, in small groups, about the drawing and the experience. The next step is to write a paper based upon the drawing and the talk. The papers are developed at the computers over a six-week period.

Level 5 An environment for communication

Students in Golub's debate class participate in AT & T's Long Distance Learning Network. After choosing one of six curriculum areas, they are assigned to a Learning Circle (six to nine classrooms located in this country and other parts of the world). Through reports, surveys, and questions, they develop the essential skill of information management.


In Chapter 11, Golub introduces strategies for integrating telecommunications into the classroom: Homework Hotline, AT & T's Learning Network, and the International Education and Resource Network.


Trimble's students use a networked computer lab and a graphics program to produce a manual for parents.

Wright helps to establish BreadNet, a computer network for both teachers and students. For teachers of composition it provides a way of communicating and eliminating isolation. For students it provides an authentic audience for writing and exchange of ideas.

When the NCTE Task Force expressed concern that computers in English classrooms were serving mainly to reinforce low level skills or, as Bruce would later categorize it, as "tutors," the Instructional Technology Committee identified six priorities. Three of the six priorities are reflected in the classroom practices of secondary English teachers as reported over the last ten years. Priorities #1 and #2 focus on the use of computers as word processors: "Uses of the micro in teaching the composing processes" and "The uses of computer programs in editing" (Oates 5). Thirty-eight of the sixty-five bibliographic entries printed above describe the computer as a "tool" to assist in the composing and/or editing process. Priority #6 emphasizes the importance of "communication skills needed for competence in an information society" (5). Seventeen of the entries identify practices which use the computer to create "an environment for communication," describing practices which incorporate networking and collaboration within and outside the classroom. The concern of the Task Force that computers would be used mainly for drills and practice is not reflected in the literature; only one entry deals with the computer as a "tutor" with programs focusing on the development of low level skills. When classroom practices are evaluated according to the Task Force concerns and the Technology
Committee priorities, teachers are making progress in effectively incorporating educational technology into the secondary English classroom.
References
