ED 340 036   CS 213 115

AUTHOR   Shields, Mark H.
TITLE   Using Computers To Improve Writing Skills and
                Attitudes of Middle School Students.
PUB DATE   Aug 91
NOTE   63p.; M.S. Practicum, Nova University.
PUB TYPE   Dissertations/Theses - Practicum Papers (043)

EDRS PRICE   MF01/PC03 Plus Postage.
DESCRIPTORS   Creative Writing; Grade 6; Intermediate Grades;
                *Microcomputers; *Middle Schools; Student Attitudes;
                *Writing Attitudes; *Writing Improvement; *Writing
                Skills
IDENTIFIERS   Middle School Students; *Story Writing

ABSTRACT
                A practicum used computers to improve the use of
standard English and the attitude towards writing of a group of
middle school students in a predominantly Nicaraguan neighborhood in
a large metropolitan area. The project was directed towards 32 sixth-
to eighth-graders of average ability who were enrolled in an
introductory computer literacy/applications course. In this
classroom, 56.25% of the students were Nicaraguan, 12.5% were White
Non-Hispanic, and 31.25% were Black. Out of this group, 10
sixth-graders were targeted for the research project on the basis of
low scores: (1) on the Stanford Achievement Test; and (2) on a
holistically assessed writing sample. An attitude survey was also
administered. After the 8-week implementation period, an assessment
of students' stories showed that they had improved their use of
standard English, and the post-treatment attitude survey indicated
that students enjoyed writing the stories and felt more positive
about the writing process. (Four tables of data and 14 references are
included. Seven appendixes--including a school improvement plan,
writing attitude presurvey and postsurvey, holistic grading criteria,
and stories written by two students--are attached.) (SR)

USING COMPUTERS TO IMPROVE WRITING SKILLS

AND ATTITUDES OF MIDDLE SCHOOL STUDENTS

by

MARK H. SHIELDS

A Practicum Report
submitted to the Faculty of the Center for the
Advancement of Education at Nova University in partial
fulfillment of the requirements for the degree of
Master of Science.

The abstract of this report may be placed in a
National Database System for reference.

August/1991

2

Abstract

Using Computers to Improve Writing Skills and Attitudes
of Middle School Students.
Shields, Mark H., 1991: Practicum Report, Nova
University, Center for the Advancement of Education.
Descriptors: Computer Assisted Instruction/Computer
Software/Microcomputers/Middle Schools/Teaching
Methods/Writing Difficulties/Writing Instruction/
Writing Processes/Word Processing/Writing Improvement/
Writing Research

The importance and effectiveness of using computers to
improve writing skills and student attitudes was
addressed in this practicum report. Research in this
area indicated that the environment, computers, and
writing assignment topic, had a positive effect on
writing skills and attitudes towards writing. The
author's objective was to develop a program that used
computers to improve the use of standard English and
the attitude towards writing of the targeted group of
10 sixth-grade students. The author administered a
prewriting sample and writing attitude presurvey.
After the implementation period, a postwriting sample
and writing postsurvey were administered to help
determine the effectiveness of the program. The
program was successful. The 10 students improved their
use of standard English as evidenced in their stories.
The students enjoyed writing the stories and as
ascertained by the answers to a writing postsurvey,
felt more positive about the writing process.
Appendices include School Improvement Plan, Writing
Attitude Presurvey, Writing Attitude Postsurvey,
Holistic Grading Criteria, and Story Written by Two
Students.

3

Authorship Statement

I hereby testify that this paper and the work it reports are entirely my own. Where it has been necessary to draw from the work of others, published or unpublished, I have acknowledged such wok in accordance with accepted scholarly and editorial practice. I give this testimony freely, out of respect for the scholarship of other workers in the field and in the hope that my own work, presented here, will earn similar respect.

<div style="text-align: right">
_____

Mark Shields
</div>

Table of Contents

vi

6

List of Tables

vii

7

CHAPTER I

Purpose

This practicum study was implemented at a large middle school located in a large metropolitan area. The predominately Nicaraguan community in which the school was located was growing and mainly comprised of blue collar workers and laborers. The neighborhood was comprised of many apartment complexes, stores, and restaurants. The school had a student population of 2,160. The school administration was made up of one principal and three assistant principals.

The practicum took place in one of two computer labs within the school. The computer lab consisted of 16 Apple IIGS computers and three Apple ImageWriter printers. The student per computer ratio was 2:1. The uniqueness of this lab was the fact that the computers and printers in the lab were connected by means of the Apple-Talk network system. A network is a system by which multiple microcomputers called workstations are connected by cable to one another. In addition, another hardware component, usually also a

1

microcomputer, is connected to the workstations. This device is characteristically faster and has a higher data-storage capacity because of its hard disk drive. This device is the file server. The primary purpose of the file server in workstation environments is to send or receive information from other computers and from peripheral devices, such as printers. The use of networks eliminates the need for managing a myriad of program disks. Application software is stored on the file server and managed by the instructional management system. This reduces the time and energy spent on distributing and collecting disks. Each workstation can also be used as a stand-alone computer, when desired, and allows users to save their data on diskettes to use at home or at any other site that is not connected to the network. Another benefit of a network is that each workstation does not need its own printer. One or several printers can serve all or many of the workstations on the network. When users request that a printout be made, the documents are sent to the printer. Through a process called spooling, the documents are placed in numerical order and are then printed in the order that the documents are sent to the

printer. The user can then use the computer for other purposes and retrieve the printed document at a later time.

The project was directed towards 32 sixth to eighth grade students of average ability. In this target group, 56.25 percent were Nicaraguan, 12.50 percent were White Non-Hispanic, and 31.25 percent were Black. The students were enrolled in an introductory computer literacy/applications course taught by this writer.

The writer has been a teacher for six years and, at the time of the practicum, taught computer literacy and programming classes at the practicum site. The writer taught six class periods a day: three classes of introduction to computer literacy/applications; one introduction to computer programming, which was comprised of seventh and eighth grade students that had been recommended for this course; and two mathematics classes. The writer was also the computer coordinator at the school. The responsibilities of this role were to attend local workshops, advise other teachers about software purchases, and initiate orders for supplies. At a local computer oriented conference, the writer had

also given a presentation about the advantages of the Apple IIGS version of LogoWriter (a program that implements both the Logo language and word processor) versus the standard version. The writer also had articles about LogoWriterGS and network geography software published in a newsletter that was distributed district wide.

Each school site within the district where this author taught proposed a yearly school-wide goal for educational improvement. The faculty at the author's school voted to make its goal to improve the students' written use of standard English.

Proper use of standard English in the areas of reading and writing can be a difficult task for American-born, English speaking students. The problem becomes more difficult when English is not the students' primary language. Because of this problem, the faculty at the practicum site decided to increase the ability of students to utilize standard English through reading and writing as a part of its district mandated school-wide goal (Appendix A:34). The author also consulted with the Language Arts Department Chairperson at the practicum site. The chairperson's

letter confirmed the author's belief that students at the author's school needed to improve their writing skills and that a program to improve these skills would enhance the language arts curriculum (Appendix B:37).

In order to determine the class from which the target group should be chosen, the author of this practicum reviewed the Stanford Achievement Test (SAT) scores of students in three of the author's introductory computer classes. A stanine score of 5 is considered average on the SAT. Table 1 clearly shows that there was a deficiency in the area of reading in the author's second period class of 32 sixth through eighth graders. Of the 32 students whose SAT scores were considered, four students had stanines in the above average range, five students scored just below the average, whereas 16 students had stanines considerably below average. There were three students whose scores were missing for reasons unknown to this author. One student was in an English for Speakers of Other Languages (ESOL) program, thus, the test score was not recorded. This author decided to choose the target group of students from this class.

Table 1

Second Period Class
Reading Stanines

Subject	Stanine	Subject	Stanine
1	3	17	5
2	4	18	3
3	4	19	6
4	3	20	2
5	4	21	2
6	#	22	9
7	5	23	3
8	3	24	3
9	4	25	*
10	8	26	3
11	3	27	3
12	*	28	2
13	3	29	9
14	*	30	5
15	2	31	2
16	4	32	3

Note: Average stanine = 5   * = Missing score
      These scores missing for reason unknown to author
      # = ESOL student whose scores were not recorded

The author then assigned a prewriting sample to
all of the students in the class. The scores on this
writing sample enabled the author to choose the target
group for this practicum, establish baseline data, and
support the problem statement. The writing samples
were graded using holistic grading criteria (Appendix
C:39). The sentence starter used was "Coming to school

is . . . ." The students were given 30 minutes to complete the writing sample. An acceptable score would be 3, 4, or 5 points. As seen in Table 2, nine of the students in the class scored between 1 and 2 points and one student scored a 3.

Table 2

Student Scores on Prewriting Sample

Student	Score
1	2
2	1
3	2
4	3
5	2
6	1
7	1
8	2
9	2
10	2

Note: Samples were graded on a scale of 5 (the highest) and 1 (the lowest).

The author then chose these 10 students who scored the lowest on the writing sample to be the members of the target group and hoped that the chosen treatment would raise their scores to a 3, 4, or 5.

The members of the target group were then given an attitude presurvey to complete. The survey was designed by the author to determine whether or not students liked to write letters, reports, and stories using pencil and paper. The results (Appendix D:41) showed an overwhelming negative attitude towards writing. Item Number 1 on the presurvey showed little difference in response because most students would rather write letters to their friends using paper and pencil because it allowed them to express themselves more openly and privately. Item Number 2, which was about writing reports, and item Number 3, which was about writing stories, showed a more negative response. The students did not like a paper-and-pencil approach to writing because so much time and effort needs to be spent rewriting and editing before the final draft is completed. This was based on conversations with the students.

There was a definite need to improve the students' writing at the school site. As noted earlier, the language arts chairperson and the faculty agreed with the author that the students' writing skills needed improvement. The students' scores on the prewriting

sample indicated that there was a discrepancy between the students' at the practicum site's actual writing scores (1 or 2 on the prewriting sample) and the acceptable level of proficiency (3 to 5). The results of the attitude presurvey indicated that the students did not like to write. Because of these factors, the author decided to develop a program that would use computers to improve the students' use of standard English in the writing process and also to instill in them a positive attitude towards writing.

Throughout the final report, the term "the author" will apply to the author of this practicum report. The author of this practicum developed a program that used computers to improve the students' use of standard English in writing. To be successful, the program had to meet two objectives:

1. After participating in an eight-week program to improve writing skills, the 10 students in the target group will increase the scores on a postwriting sample so that they meet the acceptable criteria of a total score of 3, 4, or 5. The postwriting sample will be graded on the same holistic grading as was used on the prewriting sample.

2. After participating in the eight-week program, the students will improve their attitude towards writing as assessed by a decrease to less than a total of 15 negative answers on the writing attitude postsurvey (Appendix E:43) versus the attitude presurvey.

CHAPTER II

Research and Solution Strategies

An increasing number of teachers and researchers have explored the use of computers as writing tools for students with poor writing skills. The hope was that the computer would be a more engaging tool than the pencil and would make revision easier. If students were more willing to write and were able to write and revise more easily, the overall quality of their written products would improve.

Although a number of arguments could be made against computer usage with reluctant writers, the fact remains that teachers in remedial writing courses had been unable to help their students by using traditional textbooks. Perhaps through the study of the effects of computers and text writers, the revising strategies of reluctant writers could be improved (Rosenbaum, 1984).

In a study conducted with remedial students, the teachers did not tell children what to write. Instead, they provided students with a context for discussion and helpful procedures for getting them started in the writing process. Conversational approaches included

11

activities such as joint brainstorming, having the students tell a story, or encouraging the students to recall personal experiences (Neumann and Cobb-Morocco, 1987).

Students were more willing to consider revisions and changes when the recopying penalty was eliminated. Moore (1989:381) repeated a student's explanation that "Instead of having to write reports freehand and getting writer's cramp, you can use the computer and save a lot of time, paper, and not have to scrub away spongy little eraser marks." The powerful editing tools of word processors enabled students to manipulate oral and written language as they inserted, deleted, and rearranged text. Students learned about the process of writing as they spoke, thought about, and wrote about their writing. "Computers and word processors seem to capture the creative and imaginative minds of the students" (Moore, 1989:382). Beginning and reluctant writers frequently had great thoughts but were stymied by the mechanics of getting their words onto paper, and that is where computers could be a help. Penso (1989) stated that many simple programs offer image and word integration. With limited

instruction, children will enjoy creating beautiful messages. Students at the secondary level will continue to profit from simple structured formats and picture perfect products. Several programs, such as Monsters and Make Believe, print colorful scenes and images ideal for stimulating class discussion and introducing students to story creation.

In certain situations, the teacher may have access to only one computer in the class. This should not inhibit the students from using the computer to improve writing skills. Pon (1988) addressed this situation in an article entitled "Process Writing in the One-Computer Classroom." The author suggested that there were many different kinds of prewriting activities a teacher might choose to use with the students. These ranged from brainstorming or clustering ideas to researching and participating in sensory experiences. It is suggested in the article that these activities could be done with conventional tools, but the computer lends itself perfectly to these kinds of activities. The computer is well suited for listing and grouping activities because of its inserting capacity. The use of computers as word processors for writing papers is

common place in English departments, but computers are
also helpful for demonstrating group composing. While
writing reports or research papers, students can
prepare preliminary questions and answer the questions
as they do their research (Wright, 1986).

Teachers need to be aware of the individual needs
of each student. According to an ethnographic study by
Hermann (1987), learning word processing while learning
how to write is a highly stressful experience for some
students; thus, a word processing course taught by
writing teachers should be available separate from the
composition course. Teachers have to become sensitive
to the compatibility of their teaching style with the
learning styles of their students.

A number of studies have compared the responses of
students to writing with word processors with their
responses to writing with traditional tools. One
particular study by Baer (1987) identified three
contextual variables that affect students' attitudes
towards writing: the content of the writing
assignments, including appeal of the topic and how much
involvement students have in non-composing activities;
the setting where the writing activities occur,

including the physical arrangement of the lab; and the method used for writing, including characteristics of the word processor itself and the quality of printed output. A two-year longitudinal study explored how students' thinking changed as they became experienced computer users. All of the students, when interviewed about their attitudes towards writing using computers, significantly expanded their skills, confidence, ambitions, and willingness to share their work with others. Researchers also observed students working with hypermedia technology in ways that suggested further possibilities for enhancing students' thinking skills (Tierney, 1989). Hypermedia technology helps one collect, explore, and organize information of all kinds. Information is organized on cards, a universal metaphor for storing information. Cards that could contain both text and graphics are displayed on the screen one at a time. A collection of cards make a stack (a hypermedia file) that are saved on disk. Buttons allow one to link information on one card to another card or another stack.

A three-year study examined the efficacy of computer versus paper and pencil in the teaching of

writing in the regular classroom. Results showed that the students who used computers developed more positive attitudes towards revision, drafting, and learning to use computers than those who only had brief exposure. Contributions of computers, printers, and a good learning environment led to the development of mature writing skills (Eastman et al., 1989). Moore (1989) discussed the findings of a pilot developmental writing program in a large Southeastern school district and indicated that students using word processors significantly improved the quality of their writing as compared with students not using word processors. The neat, clean typed text made students feel that they were good writers (Moore, 1989).

A significant fact that affected students' attitudes about writing on the computer was their keyboarding skills. Some researchers have reported that children could learn to type in as little as three hours of practice (Suttles, as cited in Dybdahl and Shaw, 1989). Researchers have demonstrated that writers who compose at the computer are motivated to spend more time composing. According to Solomon, as cited by Dybdahl and Shaw (1989), word processors

release children's creativity. "When they don't have to worry about the mechanics of their writing, they can be spontaneous" (Dybdahl and Shaw, 1989:381).

As stated by Balajthy (cited in Dybdahl and Shaw, 1989), interest in keyboarding skills has led many school districts to mandate the teaching of keyboarding at the elementary level. A study conducted to investigate the effects of the acquisition of keyboarding and word processing proficiency on the fluency and syntactic complexity of writing concluded that by April of the school year, the fourth graders composing on the computer were producing significantly more writing than those writing by hand.

The research matei_.1 that was discussed in this section not only revealed pertinent information about the practicum problem but also served to further stimulate the author of this practicum to tackle the problem. The sources offered what seemed to be appropriate and acceptable solution strategies for the identified problem of this practicum.

Based on the research findings of Neuman and Cobb-Morocco (1987), the author's solution strategy was to use computers to improve the writing skills of the

students in the target group by providing them with a
context for discussion and helpful procedures for
getting them started in the writing process. Pon
(1988) suggested prewriting activities such as
brainstorming and participating in sensory experiences.
Tierney (1989) suggested that students who wrote using
computers showed a more positive attitude towards
writing and were more willing to share their work with
others. Rodrigues and Rodrigues (1986) stated that
students who used word processors or other computer
writing programs demonstrated a greater pride in their
work. It was also stated that students learned to
enjoy writing more and become more fluent. The author
decided that the software package, <u>Tutor-Tech</u>, conforms
to all of the above requirements because the program is
designed to be an authoring program. The student
writes a presentation with a series of pages that can
link together in any way that the student wishes. The
users may import certain pictures or graphics into
their presentations. The users can also utilize
videodiscs into their presentations.

CHAPTER III

Method

The author chose students from the second period
class to be in the target group. The selection was
based on Stanford Achievement Test scores. The
students were all administered a prewriting sample.
The writing samples were scored using the holistic
grading criteria (Appendix C:39). The author chose the
10 lowest scoring students to be in the target group.
The author then administered a writing attitude
presurvey (Appendix D:41).

The practicum was implemented for four days a week
for eight weeks. The implementation took place in the
practicum site's computer lab. There was a computer
available for each student in the target group. The
students used an authoring computer program entitled
Tutor-Tech, published by Techware, Inc. A description
of what took place each week follows.

Week One

The author introduced the computer program, Tutor-
Tech, an authoring computer system. The author, using

19

26

an overhead projector and an LCD display unit,
projected the main program screen on a wall in the
classroom. This enabled the students to view the
program more clearly. The author demonstrated that all
components of the program are obtained by the use of
the mouse. Each pull down menu and its components were
discussed. The author also described how to import
graphics from the clip art disks as well as other disks
that accompanied the program. The emphasis of the
program was to create a "stack" that consisted of pages
linked together. The method for placing on-screen
icons called "buttons" was shown. The author also
discussed that the program the students were to create
needed to inform the user about what to do by placing
user-friendly messages on the screen.

Week Two

The author obtained books from the media center
that asked the readers to choose which way they wanted
the story to branch. The author read one of these
books to the class. They were, by a show of hands, to
vote on which way they wanted the story to branch. The
other books were left in the class and were available
to the students. The author then told the target group

that they were to write a story using the same method of branching as the one they had previously chosen. A story that had been written by the author was displayed on the wall using the overhead and LCD display. The story gave the students two decisions to make. They again voted on which ending to choose. After reading the decision that the students had made, they were again given two possible endings to choose from. The author then displayed the choices that the students did not choose.

Week Three

The students were asked to decide what type of story they wanted to write, e.g., scary stories, fantasy stories, or humorous stories. Once they decided the type of story they wanted to write, they had to create a title page.

Week Four

The concept of flowcharting was introduced. The various flowcharting symbols were discussed even though they were not needed to complete this project. The students had to plan the pages and how they were to be linked together. This prior planning was very

important because the students had to have a concrete plan for their story before trying to write it on the computer. Once they had their story planned out, the author had to approve it. The students then began creating their stories one page at a time.

Week Five

The students continued writing their stories. Because the ratio of students to computers was 2:1, one student would type one day and then save the story. Their partner would use the computer the next day. This arrangement caused some minor problems in that some students wanted to finish their story before they wanted their partner to begin. The author began the next day's class with a brief discussion about compromising. After this discussion, there were only a few occasional arguments.

Week Six

A majority of the students completed the first draft of their story. The author took this time to demonstrate how to place the on-screen icons or "buttons" on each page. This was the most important task because these buttons are what link the pages to

each other. The students were to use their flowchart of the story as a reference to help decide which pages should be linked together (Appendix F:45).

The author also demonstrated how to import graphics for those students who wished to add pictures to their stories. It was during this week that the first drafts were printed so that the author could edit them.

Week Seven

The author had spoken with the students' language arts teachers and was told that if the student turned in a copy of the story to them, the student would receive extra credit points. Because of this, the final stories were printed out in duplicate (Appendix G:47). One was kept by the author to use as examples of students' work for inservice meetings or conferences. The stories were also copied to two class disks. These disks were placed in the media center along with a copy of the program so that other students would be able to read and enjoy the stories.

<u>Week Eight</u>

The author administered the postwriting sample and
the writing attitude postsurvey. The topic for the
postwriting sample was "The last days of school . . . ."

CHAPTER IV

Results

The author of this practicum developed a program
that used computers to improve the target students' use
of standard English in writing. The program's success
was judged by two objectives.

The first objective was:

1. After participating in an eight-week program
to improve writing skills, the 10 students in the
target group will increase their scores on a
postwriting sample so that they meet the acceptable
criteria of a total score of 3, 4, or 5. The
postwriting sample will be graded on the same holistic
grading as was used on the prewriting sample.

After the eight-week implementation, the author
administered a postwriting sample and graded each one
according to the preset holistic grading criteria. The
story starter used for the postwriting sample was "The
last days of school . . . ." As can be seen in Table
3, all of the 10 students in the target group scored at
least two points higher on the postwriting sample than
on the prewriting sample and met the acceptable sc' ᵤ

25

of 3, 4, or 5. Three of the 10 students improved on the postwriting sample by one point to an acceptable score of 3 points. Four students' scores increased by two points to within the successful range of 3 to 5. One student's score did not increase, but it was still in the acceptable range. One student scored a perfect score of 5. This indicated that the first objective of the practicum was met.

Table 3

Improvement in Scores of Writing Samples

Student	Prewriting Score	Postwriting Score	Score Increase
1	2	3	+1
2	1	3	+2
3	2	4	+2
4	3	3	0
5	2	4	+2
6	1	4	+3
7	1	5	+4
8	2	3	+1
9	2	3	+1
10	2	4	+2

Note: Writing samples were graded on a scale of 5 (highest) to 1 (lowest).

The second outcome objective of the practicum was:

2. After participating in the eight-week program, the students will improve their attitude towards writing as assessed by a decrease to less than a total of 15 negative answers on the writing attitude postsurvey (Appendix E:43). The students were asked to indicate their feelings about using computers to write letters, stories, and reports. The results of the postsurvey showed that the number of negative responses decreased significantly from the presurvey. The results of the presurvey and postsurvey can be seen in Table 4.

Table 4

Comparison of
Negative Responses On
Writing Attitude Presurvey and Postsurvey

Question	Number of Negative Responses Presurvey	Postsurvey
1	8	6
2	12	2
3	10	0
Total	30	8

The program that the author designed to help students with their use of standard English was successful. Both objectives of the practicum were met.

CHAPTER V

Recommendations

The ultimate goal of this project was to use the
computer to help students strengthen their writing
skills and improve their attitude towards writing.
Because the results of this practicum were positive,
the author recommended that:

1. The author will extend the project into the
summer school curriculum as well as make it a part of
the computer curriculum at the school site.

2. Copies of the students' stories be placed in
the media center at the school site should be held for
other students to read.

3. Inservice workshops at the school site be held
to demonstrate the benefits of this program. Teachers
of other curriculum areas could then adapt the program
to fit their needs.

4. The author will write an article about the
project and submit it to the district computer
department for publication in a district-wide
newsletter.

29

In addition, the author wrote a summary of the practicum as a part of the Impact Adapter Grant, a grant that requires the recipients to choose an idea from other educators and adapt the idea to their particular classroom needs.

Because the software used, <u>Tutor-Tech</u>, is designed to be used with Apple IIe computers, it can also be used with the Apple IIGS, but the colors on the screen will be blurry. To solve the problem, the user must change the screen of the IIGS to monochrome. Another disadvantage to this program is that students may not edit their text as easily as they would on a word processor. If the Apple IIGS is the computer being used, a similar product, <u>HyperStudio 2.0</u>, by Roger Wagner Publishing Inc. would be recommended because this program is designed specifically for the IIGS computer.

Reference List

Baer, V. E. H. "Computers as Composition Tools: A Case Study of Student Attitudes." The Computing Teacher, February 1988.

Dybdahl, Claudia S. and Donna Gail Shaw. "Interaction: Keyboarding, Word Processing and Composing." Journal of Research on Computing in Education, 1989.

Eastman, Susan Tyler and others. Writing With Computers: Accommodation, Achievement, and Attitudes. Paper presented at the Annual Meeting of the International Communication Association, 1989.

Herrmann, Andrea. Teaching Writing With Computers: Are We Being Realistic. Paper presented at the Annual Meeting of the South Central Modern Language Association, 1987.

HyperStudio 2.0 (Computer Software). El Cajun, CA: Roger Wagner Publishing Inc.

Moore, Margaret A. "Computers Can Enhance Transactions Between Readers and Writers." The Reading Teacher, April 1989.

Neuman, Susan B. and Catherine Cobb-Morocco. "Writing With Word Processors for Remedial Students." The Computing Teacher. December/January 1987-88.

Penso, Rebecca Ann. "No More Scribbles and Hieroglyphics." The Computing Teacher, February 1989.

Pon, Kathy. "Process Writing in the One-Computer Classroom." The Computing Teacher, March 1988.

Rodrigues, Dawn and Raymond Rodrigues. "Teaching Writing with a Word Processor, Grades 7-13." ERIC Clearinghouse on Reading and Communication Skills, 1986.

Rosenbaum, Nina Joy. _Problems with Current Research in Writing Using the Microcomputer_. Paper presented at the Spring Conference of the Delaware Valley Writing Council and Villanova University English Department, Villanova, PA, 1984. ERIC ED 243 116

Tierney, Robert J. "Student Thinking Processes. The Influence of Immediate Computer Access on Students' Thinking. First- and Second-Year Findings." (ACOT Report #3), Cupertino, CA: Apple Classrooms of Tomorrow Research, 1989. ERIC ED 316 201

Tutor-Tech (Computer Software). Alamonte Springs, FL: Techware, Inc.

Wright, Anne. "Computers as Instructional Aids." Paper presented at the Spring Conference of the Greater St. Louis English Teachers Association, St. Louis, MO, April 11, 1986. ERIC ED 275 000.

Appendices

Appendix A

School Improvement Plan

Appendix A

SCHOOLS OF EXCELLENCE
SCHOOL IMPROVEMENT PLAN, 1990-91
(REQUIRED AND SCHOOL-SITE OPTIONAL)

A. IDENTIFICATION INFORMATION

    School Name: .   Region No.

    Location No.:   Phone:

    High School Feeder Pattern:

B. TARGETED PRIORITY GOAL

Example

Reference Code I A 2

School-Level Goal - To increase the percentage of minority students who are placed in the Developmental and Enrichment Strategies for reading and mathematics under PREP guidelines.

Actual

Reference Code · I   A   3

School-Level Goal - To increase the ability of students to utilize standard English through reading and writing.

C. RATIONALE/NEEDS ASSESSMENT (Briefly describe why the goal in "B" has been targeted for improvement. The response should refer to applicable factors at your school; e.g., student achievement data, attendance records, discipline referrals, dropout rates)

See Attachment 1

D. MEASURABLE OBJECTIVE(S) (Specify in quantifiable terms the improvement which is expected).

    Example: The percentage of Black and Hispanic students in grades K-3 which is recommended, under PREP guidelines, for placement in the Developmental and Enrichment Strategies in reading and mathematics will be at least _____% higher for the 1991-92 school year than for 1990-91.

    Actual: D.1. 70% of the students sampled will increase their writing skills in the course of the school year as measured by a pre/post analysis of writing samples.

              D.2. 70% of the students sampled will increase their reading skills in the course of the school year as measured by a pre/post test using the Reading Comprehension subtest of the Stanford Diagnostic Reading Test, Third Edition.

Appendix A

Attachment I

C. The entire faculty and staff met In small groups during their professional service periods to review the <u>Superintendent</u>'s <u>Educational Exce.lence Goals and the Objectives of</u> Selected <u>Educational Organizations/Agencies/</u>Groups and to do a needs assessment to identify the goal and objectives that was the most critical one to improve at ------- Middle School.

The goal that was identified as being most critical one to improve educational achievement at ------- Middle School was the Superintendent's goal IA3. It was selected because of standardized test results, student performance in class activities and assignments, student performance on course assessments, identified deficiencies in the use of standard English and the instructional needs of the overall student population.

Appendix B

Letter from Language Arts Chairperson

Appendix B

Letter from Department Chairperson

To Whom It May Concern:

I verify that there is a definite need to improve the writing abilities of the stuc nts at this school site. The project that Mark Shields is undertaking will be beneficial to the students.

Sincerely,

Language Arts Department
Chairperson

Appendix C

Holistic Grading Criteria

Appendix C

Holistic Grading Criteria

The completed writing samples were graded according to the following criteria:

1. Complete sentences

2. Subject-verb agreement

3. Punctuation

4. Capitalization

Papers were scored with 1 = lowest and 5 = highest for each of the above criteria.

Appendix D

Writing Attitude Presurvey

Appendix D

Writing Attitude Presurvey

Place an "X" next to your response.

Using a pencil and paper:

1. I like to write letters to my friends.

   Yes _____   No _____

2. I like to write reports.

   Yes _____   No _____

3. I like to write stories.

   Yes _____   No _____

Appendix E

Writing Attitude Postsurvey

Appendix E

Writing Attitude Postsurvey

Place an "X" next to your response.

Using a computer:

1. I would like to write letters to my friends.

    Yes _____   No _____

2. I would like to write reports.

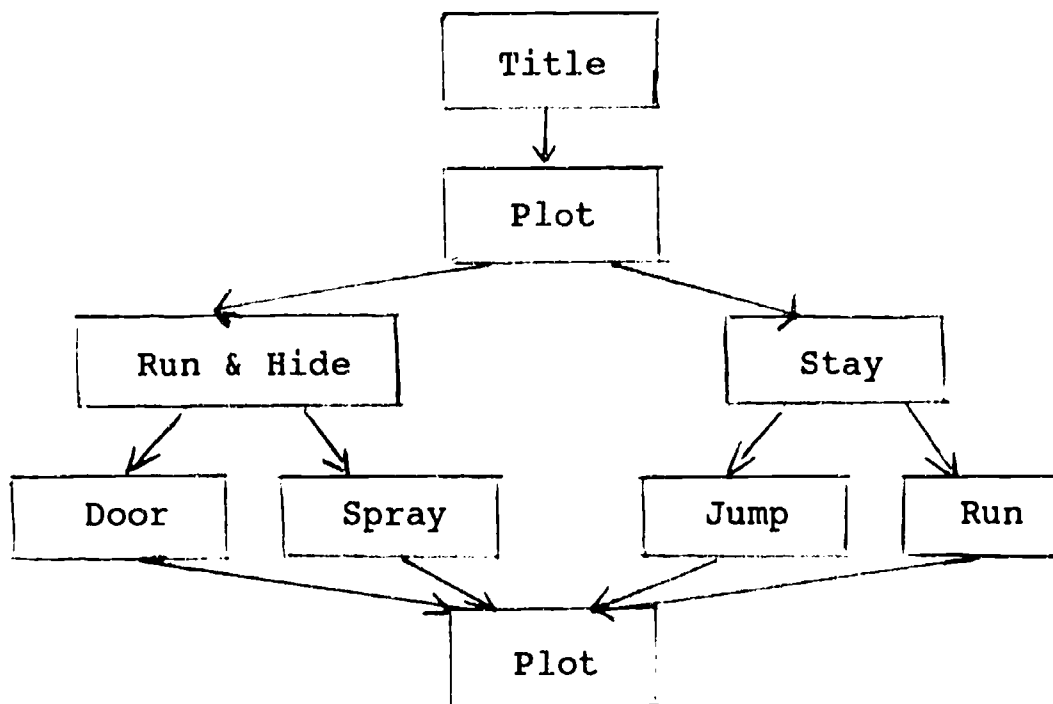   Yes _____   No _____

3. I would like to write stories.

    Yes _____   No _____

Appendix F

Flowchart of Story Written by Two Students

Appendix F

Flowchart of Story Written by Two Students

```
                    ┌──────────┐
                    │  Title   │
                    └────┬─────┘
                         │
                         ▼
                    ┌──────────┐
                    │  Plot    │
                    └──────────┘
                   ╱            ╲
                  ▼              ▼
        ┌──────────────┐    ┌──────────┐
        │  Run & Hide  │    │   Stay   │
        └──────────────┘    └──────────┘
         ╱          ╲        ╱          ╲
        ▼            ▼      ▼            ▼
   ┌────────┐  ┌────────┐ ┌────────┐ ┌────────┐
   │  Door  │  │ Spray  │ │  Jump  │ │  Run   │
   └────────┘  └────────┘ └────────┘ └────────┘
          ╲        ╲        ╱        ╱
           ╲        ▼      ▼        ╱
            ╲   ┌──────────┐      ╱
             ──│   Plot   │──
                └──────────┘
```

Appendix G

Story Written by Two Students

Appendix G

Story Written by Two Students

THE
GRASSHOPPERS

By   STUDENT #1   STUDENT #2

One Saturday afternoon, while
I was watching television I heard
little chirping noises outside.
How weird I thought. I wanted to go
outside and see what was going on
and what the noise was. As I open-
ed the door outside I saw about
50,000 grasshoppers on my front
lawn. I thought about screaming,
running, hiding inside my closet
but it was too far from the door.
I was so confused! I didn't know
what to do. The only thing I had
in mind was escaping from here

Click to continue ⊛

I stood there looking at them in
a funny way. They started hop-
ping after me.

click here if you want to run
and hide 🙂

click here if you want to
show there 🙂

I ran into the kitchen. I could
not find the fire extinguisher or
any other thing that could kill
them or scare them away. There was
no where to hide. They were all
over the kitchen. I found a way of
escaping from the kitchen, but I
could not get through. I was sur-
rounded by grasshoppers. On the
other side of the counter I saw a
can of spray but it was too far
away.
If you should reach for the door
click here.

If you should reach for the spray
click here

I was still staring at those
grasshoppers. They were coming
inside the house. Some of them were
in my hair and on my shirt, they
were everywhere. I went up the
stairs. Some of them were coming
after me. I was running so fast
that I didn't notice the dog in
front of me. I turned and ran
really hard to the right. By that
time I was willing to do anything
even jump out the window.

If you should jump out the window
click here

If you should run into a room
click here

I tried to reach for the spray.
I almost tripped in the process. I
started looking around the kitchen.
I finally had found something to
reach the spray with. It was the
broom. I got it and started rea-
ching for the spray. It finally
fell to the ground. I picked up the
spray. I sprayed everywhere but no-
thing seemed to be happening. It
took a while but finally they all
started hopping away. Soon they
were all gone. I went back to wat-
ching T.V. When my mom came home
she asked me, "What did you do to-
day?" I said, "Oh nothing."

click here to go to beginning (☺)   The End.

I started running for the door.
All of the grasshoppers started
hopping after me. Amazingly I man-
aged to run out and close the door
in time so they wouldn't follow me.
I went to a neighbor's house and
asked to use the telephone. I
called a pest control company. They
came in a few minutes. They got rid
of every last grasshopper. I was so
relieved. What a day!

The End

Click here to go to the beginning.

I ran into the room. Once I got
in I ran into the bathroom. There
was no way out. That's when I saw
the bathroom window but it was too
small for me to fit. I looked
around for something to break it
open. I found a hammer. I started
pounding. It took me a long time
to break it open. Once it was
opened I got out. I was so re-
lieved. When I got back home there
was not one grasshopper left. The
only bad thing was that my mom's
bathroom had a hole where the win-
dow was and I did not want my mom
to find out.

Click here to go to the beginning ⊛   The End

I ran to the window and opened
it. I looked down. It was high
and super scary. I wanted to back
out but I couldn't. I looked down
again, closed my eyes, and jumped.
I fell really hard on my front
lawn. But fortunately I was O.K.
I ran to call my mom. When I told
her what had happened she ran home
and got them all out. I was so re-
lieved when they were all gone.

The End.

Click to go to the beginning.