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Characteristics of Secondary English Teachers in the Millard Public Schools Who Use Microcomputers

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CHARACTERISTICS OF SECONDARY ENGLISH TEACHERS IN THE MILLARD PUBLIC SCHOOLS WHO USE MICROCOMPUTERS

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and the

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of the Requirements for the Degree

Master of Arts

University of Nebraska at Omaha

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THESIS ACCEPTANCE

Accepted for the faculty of the Graduate College, University of Nebraska, in partial fulfillment of the requirements for the degree Master of Arts, University of Nebraska at Omaha.

Committee

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July 31, 1997
Date

ABSTRACT

The basic concern of this study was to examine the relationships between various personal, educational, and professional characteristics of Millard Public Schools' secondary English teachers and their use of microcomputers in the classroom.

The subjects of this study consisted of 75 secondary English teachers in the Millard Public Schools. A questionnaire was created to quantify microcomputer and software usage by these teachers; The questionnaire focused on two areas: various demographics such as teaching experience, educational level, and participation in in-service programs, along with a focus on various types of software used and time spent using microcomputers in the classroom. After tabulating the results, the findings were analyzed. The findings identified patterns of computer usage among secondary English teachers. A strong correlation existed between microcomputer adopters and microcomputer inservice training. There was no relationship between educational attainment and computer use.

Recommendations were made for additional studies of the characteristics of teachers who use microcomputers in their classrooms. Further studies could be undertaken to determine if there is any difference in microcomputer usage in other departments within the Millard schools, and in similar curriculum areas in other school districts, and/or in other schools in general. Also, the Millard district could take steps to improve teacher accessibility to microcomputers by exploring ways to clearly determine if accessibility is truly a problem.

ACKNOWLEDGEMENTS

The completion of this thesis came about through the assistance of several persons.

Dr. James Dick, committee chairperson, gave me encouragement, support, and guidance. In particular, his impeccable professionalism was greatly appreciated. Also, the advice and support of the other members of the committee, Dr. Pamela Smith and Dr. Elliott Ostler, were extremely helpful toward completion of this project.

Finally, my wife, Pam, provided me with the support, the motivation, and the love which I needed to finish this project.

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CHAPTER I

The Problem

Introduction

Being a "sage on the stage" once was "the rage" for educators. Now, being a "guide on the side" is the current recommended teaching style. Developing a style is something every teacher does during the first few months on the job; the novice teacher must decide whether to lecture or discuss, whether to sit or stand, whether to have multiple choice or essay tests, and whether to be stern or be supple. Making choices such as these enables educators to establish their own unique teaching style. Teachers may also decide to use microcomputers in their classrooms; an important pedagogical issue affecting most teachers today. Teachers should be made aware of the benefits and the drawbacks of using the microcomputer in the classroom. This will allow teachers to choose the best style for themselves and for their students. This will allow teachers to become more effective "guides on the side."

"Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system," stated Everett Rogers (1995). Teachers routinely encounter the diffusion of educational innovations (Rogers, 1983). Innovations such as the computer constantly evolve for educators. New ways of coping with the resulting teacher concerns about computer use must be sought.

One important innovation is the use of microcomputers into the secondary English classroom. Using a microcomputer in the classroom can be a threatening experience to many teachers even though microcomputer usage

in classrooms is nothing new (Cicchelli, 1984). However, some teachers do not use computers because they are afraid of using them. While microcomputer usage in the classroom is increasing, there are some serious implementation issues facing teachers (Cicchelli & Baecher, 1989). Consequently, examining teacher characteristics related to adopting the microcomputer in the classroom is an important step toward understanding teachers' reluctance in using microcomputers. As Hall & Hord (1987) pointed out, for schools to progress, teachers must progress, and for teachers to progress, there must be appropriate innovations which they implement in their classrooms. The microcomputer is one such innovation, but there is some teacher resistance to implementation of this innovation in the classroom.

Since the late 1970's, using microcomputers in the classroom has been a major educational innovation (Cicchelli & Baecher, 1989). Computers can help teachers manage classroom information and can help teach students. There is an abundance of research that documents the benefits of using microcomputers in the classroom. However, some educational researchers have recognized a need to address teachers' personal concerns related to adopting the microcomputer in the classroom, particularly those concerns of teachers most resistant to innovation. Understanding their concerns could lead to increased use of computers in the classroom.

Research which examines teachers' personal concerns related to microcomputer usage as well as research that proves the benefits of microcomputer usage in the classroom worthwhile is essential. Quantifying teacher characteristics related to microcomputer usage in the classroom can

assist school districts in implementing successful inservice programs that deal with innovations such as using the microcomputer in the classroom.

Statement of the Problem

What is the relationship between various personal, educational, and professional characteristics of secondary English teachers in the Millard Public Schools regarding use of the microcomputer in the classroom?

Definition

Microcomputer use is defined as a combination of classroom computer usage, types of software used, and hours per week computers are used.

Purposes of the Study

The multiple purposes of this study will be to examine the characteristics that differentiate microcomputer users from non-users among secondary English teachers in order to identify which characteristics are likely to distinguish microcomputer users from non-users. The study will also examine microcomputer usage and teacher participation in inservice programs to discern the relationship between these two variables. Finally, this study will examine microcomputer usage and teaching experience among secondary English teachers in the Millard Public Schools to determine the relationship between these two variables.

Background

Five years ago, a Millard Public High School opened a microcomputer user lab for students and teachers. A first-year English teacher noticed that some English teachers were more likely to use the microcomputer lab for instruction than others. The computers had various software packages installed

to provide assistance to English teachers. Also, there were microcomputer instructional carts provided for teachers to wheel into their classrooms for educational activities. Some teachers utilized the "smart-carts" as they were called, and some did not utilize them. Various patterns of the innovation and usage of microcomputers were observed. The first-year teacher became curious about what personal, professional, and educational characteristics could be accounting for the microcomputer usage.

Research Questions

The following questions will provide the basis for the study:

1. What are the characteristics of secondary English teachers in the Millard Public Schools with regard to microcomputer use in the classroom?
2. What is the relationship between the use of microcomputers and educational attainment of secondary English teachers?
3. What is the relationship between the use of microcomputers and inservice participation of secondary English teachers?

The population for this study is the 75 English teachers in the Millard Public Schools. This descriptive study was designed to measure teacher characteristics related to using microcomputers in the secondary English classroom. The Computer and Software Usage Survey provided information about various characteristics of Millard secondary English teachers such as educational level attained, years of teaching experience, and grade level taught. Also, it provided data about the types of software used, the amount of

time teachers use the computer in the classroom per week and reasons for non-use of computers.

Data from the 54 surveys that were returned were analyzed to determine the characteristics that differentiate microcomputer users from non-users, the relationship between computer use and inservice participation, and the relationship between computer use and years in teaching.

CHAPTER II

Review of Literature

This review of literature will explore how teachers are affected by educational change and innovation. Second, it will investigate the impact of inservice training on the use of computers in the classroom. Finally, it will explore the characteristics of teachers who use microcomputers in the classroom.

Teachers and Change

According to Schrug, Western, and Enochs (1997), teachers must be allowed to make thoughtful choices about implementing innovations such as microcomputer technology. When this happens, teachers can make professional decisions about the best combination of costs and benefits for themselves and for their students.

While implementing innovations may offer numerous benefits, a study by the Educational Testing Service suggests that few teachers have had much training in how to use computers to enhance student learning. In fact, only 15 percent of teachers nationwide have taken nine hours or more of training in educational technology ("Web Closed," 1997).

Training Teachers in the Use of Innovations

Hall (1978) stated that teachers who were given sufficient time and targeted inservice activities would have fewer concerns about implementing educational innovations. If teachers are to successfully incorporate innovations such as microcomputers, they must have access to other persons from whom they can learn, including experts who have mastered the new skills or

teacher-learners who pool their resources and share their findings about the innovation (Becker, 1994). However, before information sharing about an innovation is undertaken, teachers' personal concerns must be addressed through staff development programs (Becker, 1994).

Teachers are interested in how an innovation will affect their students, but attention must first be paid to how the innovation will affect them (Hall and Rutherford, 1979). For instance, potential adopters of innovation should be told how much time it will take and what they will need to learn to use an innovation.

Also, initial inservice activities should focus on providing teachers with relevant knowledge about computers themselves and less about the impact of the computers on students; follow-up inservice activities should address implementation concerns. Only after individual teacher concerns are accommodated can the technology be discussed and utilized (Hall and Rutherford, 1979).

Innovation Research

Everett Rogers (1995), a pioneer scholar in the area of the diffusion and communication of innovations, has synthesized considerable research related to the diffusion of innovations over the past 35 years. Rogers stated, "diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system." Specifically, diffusion deals with how information about an innovation is communicated over time throughout a social system before an innovation is adopted. Rogers' research indicates that successful implementation of change and adoption of innovations involves two key elements: an innovation and effective

communication of it.

Rogers' first summary of diffusion research, Diffusion of Innovations, was published in 1962. Subsequently, he authored three revisions and expansions of this text: Communication of Innovations, A Cross Cultural Approach (1971), Diffusion of Innovations (3rd edition 1983), and Diffusion of Innovations (4th edition 1995). These books have provided revised theoretical frameworks and updated research evidence related to diffusion of innovations in agriculture, medicine, public health, and education. He has also reviewed research on the diffusion of innovations from a cross cultural perspective.

Research has proved helpful when evaluating the diffusion of educational innovation. Paul Mort of Columbia University initiated diffusion studies in the 1920's and 1930's. His Columbia studies demonstrated that local control over school finances was related to innovativeness in schools. Today, research into education diffusion continues to provide significant information related to the concepts of change, innovation, and progress in our nation's schools.

Characteristics of Innovation Adopters

What are the general characteristics of innovation adopters? According to Rogers (1995), there are numerous individual variables associated with innovativeness, including socioeconomic and personality traits, and communication behavior.

As Rogers observed, there are several socioeconomic and personality variables such as age, attitude, educational level, and ambition which are related to adopting an innovation. For instance, earlier adopters of innovation

have a more favorable attitude toward change than later adopters, and they have a more favorable attitude toward education than later adopters. Also, earlier adopters have more years of education than later adopters have. Finally, earlier adopters have higher aspirations than later adopters (Rogers, 1995).

Communication behavior is an important variable accompanying innovation adoption. Earlier adopters are more cosmopolite than later adopters. Rogers defines "cosmopoliteness" as the degree to which an individual is oriented outside their local social system. Cosmopolites travel widely, and they are involved in matters beyond their local system. For example, cosmopolite teachers travel to national or state meetings of professional organizations more often than the typical teacher. In addition, earlier adopters have greater exposure to interpersonal communication channels such as workshops and seminars than later adopters. Also, earlier adopters seek information about innovations through college courses more actively than later adopters. Earlier adopters have greater knowledge of innovations as well (Rogers, 1995).

According to Lawrence Cameron (1993), there are significant relationships between teacher characteristics such as years in teaching, grade level taught, and education attainment and degree to which teachers adopt innovations. Furthermore, teachers with more teaching experience perceived themselves as more willing to innovate with technology. Cameron's findings on years in teaching and use of innovations are similar to Roger's research.

Nataki Peko's (1994) research on innovative teachers suggested that

potential innovation adopters can be identified according to educational level and that these potential adopters need to be engaged as active participants early in the innovation diffusion process.

Characteristics of Microcomputer Users

What is it about a teacher's background which makes him or her more or less likely to use microcomputers in the classroom? According to Becker (1994), exemplary computer-using teachers, defined as teachers with at least five years experience with microcomputers, tend to spend more than twice as many hours personally working on computers at school. However, there were only small differences in home computer usage between exemplary computer-users and other teachers. Hence, the time investments made by these two groups of teachers in using computers was determined as much by the opportunities they had to use computers at school as by their personal interest in using computers (Becker, 1994).

Having knowledge of microcomputers does not necessarily guarantee their use. As Henry Becker (1994) observed, at least five years of experience using microcomputers are required for teachers to develop computer expertise. Although experience itself does not ensure effective instructional practices using computers, it does help. English teachers who used microcomputers were more likely to have learned about them through self-instruction than through formal training, and they were more likely to spend time using microcomputers at home than other teachers.

A reason for non use of the microcomputer is the lack of opportunities for teachers to become more comfortable using them. As Andrea Herrmann (1987)

observed in a study, when a high school principal was asked why he thought more teachers were not using computers in his building, his reply was that teachers were apprehensive. Because teachers need opportunities to become comfortable with the equipment and to discover approaches which would accommodate their educational goals, Herrmann's study suggests that teacher trepidation may be well founded. In which case, more training opportunities must be provided for teachers to deal with such a concern (Herrmann, 1987).

In addition, by scheduling workshops and by providing released time or even extra pay, schools can meet the needs of teachers and can encourage reluctant teachers (Herrmann, 1987). In Becker's 1994 study, exemplary computer-using teachers reported having more formal training in using and teaching with microcomputers than did other users. Also, microcomputer users have higher levels of perceived departmental support than non users (Becker, 1994). According to Al-Amri (1994), non-microcomputer users reported having less time, less knowledge, and less accessibility to microcomputers.

An additional characteristic for exemplary computer-using teachers was their level of education. Exemplary computer-using teachers accumulate significantly more credits and degrees than other teachers (Becker, 1994). Al-Amri (1994) also reported that teachers with advanced degrees are more likely to use computers in their classrooms.

CHAPTER III

Methodology

Introduction

This chapter includes a description of the subjects of the study, an explanation of the instrumentation and data collection, a discussion of the procedure, and a description of the proposed data analysis.

Subjects

The 75 subjects in this study were all English teachers of public high schools and middle schools in the Millard Public Schools. The 1995-96 Millard Public Schools Staff Directory was used to compile a list of names.

Instrumentation

The questionnaire was created using a modified Delphi technique (Appendix C). Several instruments and numerous surveys related to this topic were used as models to create the survey for this study. Based on these models, a survey was created for this study. After revisions, the survey was reviewed by graduate faculty members of the University of Nebraska at Omaha. Then, a jury of individuals, including two secondary English teachers not associated with the study, examined the instrument and offered additional recommendations for improvement.

The Procedure

First, approval of the study was sought from an assistant principal for curriculum and instruction in a Millard High School. A copy of this letter of endorsement can be found in Appendix A. Then, the Millard school district was contacted to obtain permission to involve its teachers in this study. Guarantees

were given to provide privacy and anonymity to the teachers, the schools, and the district. Furthermore, an exemption was sought from and granted from by the Institutional Review Board of the University of Nebraska concerning use of human subjects in this study (Appendix B). A copy of the Computer and Software Usage Survey appears in Appendix C. A copy of the cover letter attached to the survey, explaining the purpose and origin of the study, can be found in Appendix D.

A list of subjects totaling 75 English teachers was compiled. The questionnaire was delivered to all Millard secondary English teachers over a one-week period.

Data Collection

After 54 of the 75 surveys were returned for a 72% return rate, the responses were transferred to National Computer systems Sentry Scantron sheets. Tallies of the responses to each question were tabulated.

Data Analysis

Data will be analyzed according to the research questions in Chapter I: The analysis will consist of observing demographic data, obtaining a Spearman rank order correlation coefficient to examine the relationship between microcomputer use and inservice training, and using a modified Tukey analysis to determine the relationship between microcomputer use and educational attainment.

CHAPTER IV

Results

Introduction

This chapter examines the data collected from the teacher questionnaires. The basic concern of this study was to examine the relationship between various personal, educational, and professional characteristics of secondary English teachers in the Millard Public Schools and use of microcomputers in the classroom. The presentation of results is organized according to personal data and microcomputer use data: years in teaching, grade level taught, age, educational attainment, workshop/seminar involvement, college courses, home computer usage, type of classroom computer, software usage, and reasons for not using the microcomputer in the classroom. To facilitate understanding of the results, the data is presented in three tables: one relating to demographic data, and two more relating to microcomputer use.

All 54 questionnaires which were returned were acceptable for inclusion in the study. The information from the surveys was transferred to National Computer Systems Sentry Scantron sheets to tally the results.

Demographic Data

The survey was sent to 75 secondary English teachers in the Millard Public Schools; 54 English teachers (72%) responded to the survey.

Research Question 1:

Data collected for research question 1 is summarized in the following table. It includes the percentage of responses in each response category for each question on the survey:

TABLE I

Demographic Responses on Survey (Section 1)

Survey Item	Response Percentages
1. Years in Teaching	
a. 1 - 5 years	18.5%
b. 6 - 10 years	20.3%
c. 11- 15 years	28.0 %
d. 16 - 20 years	18.5%
e. 20 - up years	16.7%
2. Grade Level Taught	
a. Middle School	44.4%
b. High School	55.6%
3. Age	
a. 20 - 29 years old	16.7%
b. 30 - 39 years old	22.2%
c. 40 - 49 years old	38.9%

d. 50 + years old	22.2%

4. Education

a. Bachelor's	14.8%
b. Bachelor's and additional hours	29.7%
c. Master's	12.9%
d. Master's and additional hours	42.6%

5. Attendance at Computer Workshops/Seminars

a. School Inservice	79.6%
b. District Inservice	62.9%
c. ESU Inservice	48.1%

6. College Microcomputer Courses

a. Yes	38.9%
b. No	61.1%

7. Membership in National Council for Teachers of English (NCTE)

a. Yes	42.6%
b. No	57.4%

8. Membership in International Reading Association (IRA)

a. Yes	.5%
b. No	99.5%

9. Attendance at State or National Meeting of NCTE or IRA

a. Yes	24.0%
b. No	76.0%

10. Use of Home Computer

a. Yes	79.6%
b. No	20.4%

Table I contains demographic information related to the following: years in teaching, grade level taught, age, educational attainment, workshop/seminar involvement, college courses taken involving microcomputers, membership in professional organizations, and home computer usage.

Table II illustrates the frequency of responses or response percentages falling into each response category for the survey questions in section II.

TABLE II

Survey Responses Related to Computer Use (Section 2)

Survey Item	Response Percentages
1. Type of Classroom Computer	
a. Apple (Mac)	96.0%
b. IBM	4.0%

2. Classroom Computer Usage	Response Frequency
a. To model/demonstrate	24
b. To revise/edit	28
c. To research	25
d. To communicate	27
e. To present	19
f. To write	39

3. Types of Software Used

6A. Instructional	#	6B. Informational	#	6C. Managerial	#
a. Clarisworks	49	a. Groliers	14	a. MicroGrade	37
b. Aspects	9	b. Encarta	6	b. MicroTest	2
c. Daedalus	5	c. Groupwise	32	c. CalendarMaker	19

4. Classroom Microcomputer Usage (hrs/week)	Response Frequency
a. 1-5	20
b. 6-10	17
c. 11-15	5
d. 16-20	5
e. 21+	0
f. none	7

5. Reason for Not Using Microcomputers	Response Frequency
a. Lack of computer skills	6
b. Lack of interest	1
c. Lack of access	7
d. Lack of time	4
e. Lack of training	4

A majority of microcomputer-using English teachers used the Macintosh microcomputers. Most respondents used the classroom computer to write. Also, a majority of teachers used the computer to revise, to communicate, to model/demonstrate, and to research. A majority of respondents reported using Clarisworks (word processing), Micrograde (grade keeping), and Groupwise (intraoffice e-mailing) software in the classroom.

Also, 19 respondents used Calendarmaker software. Twenty subjects used microcomputers in the classroom between 1-5 hours per week. Seventeen subjects used the them between 6-10 hours per week. Five

subjects used them between 11-15 hours per week. Five subjects used them between 16-20 per week. Finally, seven subjects did not use the microcomputer at all. Lack of access to microcomputers was the most frequent response given for not using microcomputers. Next, lack of computer skills was also cited frequently by non-users. Lack of time and training accounted for the remainder of the reasons for not incorporating the microcomputer in the secondary English classroom.

Research Question 2:

The relationships between the use of microcomputers and educational attainment will be determined by using a modified Tukey analysis. The data obtained from this calculation will measure the strength of the relationship between the two variables identified. Discussion will follow in Chapter 5 in relation to the impact of the data.

Table III illustrates the percentage falling into each response category for each survey question, and number of points given to a particular response. One point was awarded for each response given for question numbers 2,3, & 4 in section II of the survey.

TABLE III

Survey Responses Related to Computer Use Questions 2,3,&4 (Section 2)

	Ed. Level	%	Usage Pts.	%
BA	8	14.81	53	13.8
BA+	16	29.63	119	30.98
MA	7	12.96	48	12.5
MA+	23	42.59	164	42.7
	n=54		=384	

Table III indicates that educational level does not correlate significantly with microcomputer usage. Data suggest that microcomputer usage is steady at each educational level.

Research Question 3:

The relationship between the use of microcomputers and the extent to which the teachers participation in inservice education and college computer classes will be determined by using a Spearman Rank Order Correlation Coefficient. This calculation will measure the strength of the relationship between the two variables identified. The Spearman coefficient obtained from this calculation was .48, indicating a fairly strong positive correlation between the two variables. Discussion will follow in Chapter 5 in relation to the impact of the calculated coefficient.

CHAPTER V

Conclusions and Recommendations

Summary

This study was based on data to present a picture of the characteristics of English teachers in the Millard secondary schools who use microcomputers in the secondary classroom and an outline of how they use computers in the classroom. This investigation is significant in recognizing if additional inservice should be provided for secondary English teachers who are currently not using microcomputers.

The results of Chapter IV were used in this chapter to answer the following questions:

1. What are the characteristics of secondary English teachers in the Millard Public Schools with regard to microcomputer use in the classroom?
2. What is the relationship between use of microcomputers and educational attainment of secondary English teachers?
3. What is the relationship between use of microcomputers and inservice participation of secondary English teachers?

Conclusions

This study involved a sample of 54 secondary English teachers in the Millard Public Schools during the 1995-96 academic year. Data from the study indicate the following conclusions: A strong positive correlation exists between microcomputer adopters and microcomputer inservice training. Educational level does not correlate significantly with microcomputer usage.

There proved to be a strong link between microcomputer users and inservice training. The correlation coefficient calculated from the Spearman Rank Order was .48. This confirms previous studies revealing that teachers who attended inservice activities will increase their use of microcomputers in the classroom. Based on the data, teachers' personal concerns are being addressed through staff development opportunities. Furthermore, the data suggests that inservice activities appear to be providing teachers with relevant knowledge about computers resulting in increased information-sharing and experimentation with microcomputers. However, inservice training should be increased so that teachers could be made more aware of the uses of microcomputers in the classroom. Such awareness will lead to greater classroom usage. A variety of different software packages should be introduced as well to further improve their classroom management and instruction skills, and student motivation.

Also, there appears to be a number of ways English teachers use microcomputers in the classroom. Forty-nine out of 54 Millard secondary English teachers who responded have their students use microcomputers to prepare papers. Word processing programs like Clarisworks can motivate students as they draft papers. Students can utilize the organizing, storing, printing, and spell-checking capabilities that the microcomputer provides. An added plus for teachers is that they do not have to struggle to read hand-written student drafts. This may account for why over 90% of the respondents have their students use Clarisworks in the classroom.

Thirty-seven out of 54 (69%) respondents used Micrograde software.

Software programs such as Micrograde enable teachers to organize, manipulate, and illustrate student data simply and quickly. With increased diffusion of software such as Clarisworks and Micrograde through inservice sessions, a teacher's job can become simpler and easier.

Lack of access appears to be a significant factor as to why some Millard secondary English teachers do not use microcomputers in the classroom. Nine out of 13 teachers who do not use the microcomputer in the classroom cited "lack of access" as a reason for not using computers. There may be a limited number of microcomputers available for teachers to use at some schools. Providing more microcomputers for teacher use would allow teachers more of an opportunity to experiment with computers.

Recommendations

Based upon the data found in this project, four recommendations are made. First, further study about secondary English teachers use of microcomputers in the classroom should be undertaken. This should include a continued analysis of the characteristics of teachers who are likely to use microcomputers in their classrooms. Further studies should be done to determine if there is any difference between microcomputer usage in other departments of the Millard schools, and in English departments in other school districts. In addition, the researcher recommends that the district provide continued microcomputer inservice opportunities to secondary English teachers which may encourage more teachers to use microcomputers in their classrooms. Also, the district should take steps to improve teacher accessibility to microcomputers by exploring ways to clearly determine if accessibility is truly

a problem. Finally, the district could take steps to encourage teacher usage of microcomputers in the classroom by providing teachers with the time, tutelage, and technology needed to increase the use of microcomputers in the secondary English classroom. Accessibility and time will help teachers familiarize themselves with the microcomputer and with appropriate software. Availability and tutelage will allow teachers to choose the best teaching style for themselves and for their students. Training and technology will allow teachers to be effective "guides on the side."

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APPENDIX A

Endorsement Letter

Millard PUBLIC SCHOOLS

Millard North High School • 1010 So. 144th St. • Omaha, NE 68154-2899 • (402) 691-1365 • (Fax) 691-1336

July 1, 1996

To Whom It May Concern:

Brian Begley is an English teacher here at Millard North. He has developed a proposal to determine the characteristics of microcomputer users from non-users among secondary English teachers in the Millard Public School District.

This letter is written to verify support for Brian's study here at the building level. The results should prove interesting.

If I can be of further assistance, please call me at 691-1410.

Sincerely,

Linda Wyatt

Linda Wyatt
Asst. Prin. C & I

APPENDIX B

IRB Approval Forms

University of Nebraska
Nebraska's Health Science Center

Institutional Review Board
For the Protection of
Human Subjects

University of Nebraska Medical Center
Eppley Science Hall 3018
600 South 42nd Street
Box 986810
Omaha, NE 68198-6810
(402) 559-6463
Fax (402) 559-7845

July 30, 1996

Mr. Brian Begley
1010 South 144th Street
Omaha, NE 68154

IRB #: 004-97-EX

TITLE OF PROTOCOL: Teacher Characteristics Relating to Microcomputer Usage in the Secondary English Classroom

Dear Mr. Begley:

The IRB has reviewed your Exemption Form for the above-titled research project. According to the information provided, this project is exempt under 45 CFR 46:101b, category 2. You are therefore authorized to begin the research.

It is understood this project will be conducted in full accordance with all applicable sections of the IRB Guidelines. It is also understood that the IRB will be immediately notified of any proposed changes that may affect the exempt status of your research project.

Sincerely,

E D Prentice

Ernest D. Prentice, PhD
Vice Chairman, IRB

EDP:jlg

University of Nebraska
Institutional Review Board
For the Protection of
Human Subjects

University of Nebraska Medical Center
Eppley Science Hall 3018
600 South 42nd Street
Omaha, NE 68198-6810
(402) 559-6463
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EXEMPTION FORM

IRB# 0 0 4 - '97 EX

SECTION I: APPLICATION DATA

TITLE OF RESEARCH PROPOSAL: Teacher Characteristics Relating to Microcomputer Usage in the Secondary English Classroom

STARTING DATE: Pending IRB approval

PRINCIPAL INVESTIGATOR: Brian Bosley

SECONDARY INVESTIGATOR(S): none

DEPARTMENT/COLLEGE: Teacher Education

ADDRESS: 1010 S. 144th Street Omaha, NE **ZIP CODE:** 68154

TELEPHONE: 691-1381

SECTION 2: CERTIFICATION

CERTIFICATION OF PRINCIPAL INVESTIGATOR: Signature certifies that the research project as described will be conducted in full compliance with University of Nebraska Regulations governing human subject research as stated in the IRB Guidelines for the Protection of Human Subjects. It is understood that the IRB will be notified of any proposed changes which may affect the exempt status of the research.

Brian Bosley
Signature of Principal Investigator

June 27, 1996
Date

Graduate Student
Position

ADVISOR APPROVAL: Student investigators are required to obtain approval from their advisor. Signature of approval certifies the research proposal has been approved and recommended for submission to the IRB.

James Dick
Signature of Advisor

June 27 1996
Date

James Dick Ed.D
Printed Name of Advisor

The IRB requires submission of an original and one (1) copy of the Exemption Form.

SECTION 3: REVIEW INFORMATION

In order to determine whether your proposal qualifies for exempt status under 45 CFR 46:101(b), the IRB requests submission of the following information. Each subpart must be titled as described below and addressed in the listed sequence.

I. **PURPOSE OF THE STUDY.** State concisely and realistically what the research in this proposal is intended to accomplish.

II. **CHARACTERISTICS OF THE SUBJECT POPULATION.** Address the following questions in sequence using the listed subheadings. 33
   a. **AGE RANGE.** What is the age range of the subjects?
   b. **SEX.** What is the sex of the subjects?
   c. **NUMBER.** What is the anticipated number of subjects?
   d. **SELECTION CRITERIA.** What are the subject selection criteria?

III. **METHOD OF SUBJECT SELECTION.** Describe the method(s) to be employed in the identification/recruitment of prospective subjects.

IV. **STUDY SITE.** State the location(s) where the study will be conducted. Attach letters of approval from any non-University of Nebraska study site.

V. **DESCRIPTION OF PROCEDURES.** Describe all procedures to be applied to subjects. Attach one copy of all surveys, questionnaires, and educational tests.

VI. **CONFIDENTIALITY.** Describe how and the extent to which confidentiality of data will be maintained.

VII. **INFORMED CONSENT.** Some technically exempt research projects ethically require informed consent (written or oral). If, in the investigator's opinion, the study requires informed consent, the method used to obtain informed consent should be described and any written consent forms submitted. If the study does not require consent, it should be so stated and justified.

VIII. **JUSTIFICATION OF EXEMPTION.** The exempt category (1-6) under which the proposal is submitted should be stated and justified.

SECTION 4: CATEGORIES OF RESEARCH THAT QUALIFY FOR EXEMPT STATUS

Research activities in which the only involvement of human subjects will be in one or more of the categories specified by Federal Regulations 45 CFR 46:101(b) are exempt from the requirements of 45 CFR 46. Only an Exemption Form must be submitted and approved by the IRB. The exempt categories do not, however, apply to research involving deception of subjects (the researcher deceives the subject with regard to the purpose of the research and/or the results of the subject's actions in the study), sensitive behavioral research, or to research involving pregnant women, prisoners, mentally incompetent people and other subject populations determined to be vulnerable.

Exempt Categories:

1. Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as: (i) research on regular or special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

   Educational research protocols are exempt providing **all** of the following conditions are met:

   a. All of the research is conducted in a commonly accepted educational setting (e.g., public school).

   b. The research involves normal educational practices (e.g., comparison of instructional techniques).

   c. The study procedures do not represent a significant deviation in time or effort requirements from those educational practices already existent at the study site.

   d. The study procedures involve no increase in the level of risk or discomfort attendant normal, routine educational practices.

   e. The study procedures do not involve sensitive subjects (e.g., sex education).

   f. Provisions are made to ensure the existence of a non-coercive environment for those students who choose not to participate.

   g. The school or other institution grants written approval for the research to be conducted.

   NOTE: When an educational research project meets **all** of the above-listed conditions the IRB does not require parental consent. The investigator and/or the school system may, however, decide that parental consent should be obtained. Verbal child assent should be obtained. Educational projects that do not meet the above-listed conditions are not exempt and must be reviewed by either the expedited or full Board method.

2. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; **and** (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

NOTE: Sensitive survey research is **not** exempt. A sensitive survey is one that deals with sensitive or highly personal aspects of the subject's behavior, life experiences or attitudes. Examples include chemical substance abuse, sexual activity or attitudes, sexual abuse, criminal behavior, sensitive demographic data, detailed health history, etc. The principal determination of sensitivity is whether or not the survey research presents a potential risk to the subject in terms of possible precipitation of a negative emotional reaction. An additional risk consideration is, of course, whether or not there is risk associated with a breach of confidentiality should one occur. With respect to potential psychological risk associated with a survey, the presence or absence of subject identifiers is not necessarily a consideration since the risk may be primarily associated with the sensitive nature of the survey as opposed to being dependent upon confidentiality. Subject identifiers do, however, become a factor when confidentiality is an issue.

NOTE: When children are involved as subjects in research using survey or interview procedures, the research is **not** exempt.

NOTE: When children are involved as subjects in research using observation techniques, the research is **not** exempt if the investigator participates in the activities being observed.

NOTE: Observation research involving sensitive aspects of a subject's behavior is **not** exempt.

3. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph 2 of this section, if: (i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

4. Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects **cannot** be identified, directly or through identifiers linked to the subjects.

5. Research and demonstration projects which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.

6. Taste and food quality evaluation and consumer acceptance studies: (i) if wholesome foods without additives are consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

Section 3: Review Information

I. **Purpose of the Study:** The completion of this study will show how English teachers' characteristics relate to their use or non-use of microcomputers as an instructional tool in the classroom. The results will indicate if English teachers need in services, workshops, and/or classes on using microcomputers in their classrooms.

II. **Characteristics of the Subject Population**
   A. Age Range: @ 21 to 64 years old
   B. Sex: male and female
   C. Number: 80 subjects
   D. Selection Criteria: the subjects must be secondary English teachers who are currently teaching

III. **Method of Subject Selection:** The subjects will selected through a district-wide list of secondary English teachers provided from the Millard Public Schools Staff Directory.

IV. **Study Site:** The study will be conducted at Millard North High School in Omaha, Nebraska.

V. **Description of procedures:** A questionnaire which has been designed to take no more than 5 minutes to complete, a cover letter, and a self-addressed stamped envelope will be sent to the subjects to complete and return.

VI. **Confidentiality:** Confidentiality will be maintained through not asking the subjects to reveal their names and locations. Only demographic information such as sex, age, education, and teaching experience will be asked.

VII. **Informed Consent:** This study does not require consent because participation is optional; only adults are participating; and the study is not a sensitive survey.

VIII. **Justification of Exemption:**
   1. The research will be conducted in commonly accepted educational setting, and it involves normal educational practices.
      a. The research is conducted at Millard North High School, a public school.
      b. The research involves normal educational practices: computer usage in the classroom.
      c. The study procedures do not represent a significant deviation in time or effort; the questionnaire has been designed to last no more than 5 minutes.
      d. The study procedures do not involve an level of risk or discomfort to the subjects.

e. The study does not involve sensitive subjects; the subject is computer usage in the classroom.
f. No provisions are needed to ensure the existence of a non-coercive environment for those students who choose not to participate because only adults are participating.
g. Written approval has been granted for the research. The approval is attached.

2. The research will not reveal the subjects' identities or place them at any type of risk.
3. The research will not survey public officials, and confidentiality will be maintained.
4. The subjects cannot be identified.
5. The study is not designed to study public benefit or service programs; procedures for obtaining benefits or services under those programs; possible in or alternatives to those programs or procedures, or possible changes in methods or levels or payment for benefits or services under those programs; thus, approval of department or agency heads is not needed.
6. Taste and food quality is not part of the study.

APPENDIX C

Computer and Software Usage Survey

Computer and Software Usage Survey

SECTION I - Please circle the appropriate response to the following questions.

1. ***Years in Teaching*** : a. 1-5 b. 6-10 c. 11-15 d. 16-20 e. 21+

2. ***Grade Level Taught***: a. middle school b. high school

3. ***Age:*** a. 20-29 years old b. 30-39 years old
   c. 40-49 years old d. 50+ years old

4. ***Education*** : a. Bachelor's b. Bachelor's and additional hours
   c. Master's d. Master's and additional hours

5. Which of the following types of ***Computer Workshops/Seminars*** have you attended? (You may circle more than one response)
   a. school in-service b. district in-service c. ESU in-service d. Other(Specify)_____

6. Have you completed a ***College Course*** in using computers in the classroom?
   a. yes b. no

7. a. Are you currently a member of ***National Council for Teachers of English*** (NCTE)?
   a. yes b. no
   b. Are you currently a member of ***International Reading Association*** (IRA)?
   a. yes b. no
   c. ***Other Professional Memberships*** (Specify)_____

8. Have you attended a ***state or national meeting*** of the NCTE, IRA, or other content-area professional association in the last 3 years?
   a. yes b. no

SECTION II - Please circle the appropriate response to the following questions.

1. ***Type of Classroom Computer*** :
   a. Apple(Mac) b. IBM

2. ***Classroom Computer Usage*** : (Circle as many as appropriate)
   a. To model/demonstrate b. To revise/edit c. To research d. To communicate
   e. To present f. To write g. Other(Specify)_____

3. ***Types of Software Used:*** (Circle as many as appropriate)

6A. Instructional	6B. Informational	6C. Managerial
a. Clarisworks	a. Groliers	a. MicroGrade
b. Aspects	b. Encarta	b. MicroTest
c. Daedalus	c. Groupwise	c. CalendarMaker
d. Other(Specify)_____	d. Other_____	d. Other_____

4. Approximately how many ***hours per week*** do you use a computer in your classroom?
   a. 1-5 b. 6-10 c. 11-15 d. 16-20 e. 21+ f. none

5. If you circled ***none*** in question #4, please indicate reasons for not using a computer in the classroom. (Circle as many as appropriate)
   a. Lack of computer skills b. Lack of interest c. Lack of access
   d. Lack of time e. Lack of training Other(specify)_____

6. Do you use a ***home computer***?
   a. yes b. no

Thank you for completing this questionnaire.

APPENDIX D

Survey Cover Letter

University of
Nebraska at
Omaha

Teacher Education Department
Omaha, Nebraska 68182-0163
(402) 554-3666
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October 1996

Dear Colleague:

I am asking for your participation in a research study that will determine secondary English teachers' characteristics relating to use or non-use of micro-computers as an instructional tool in the classroom. It has been designed to take less than 5 minutes to complete, and a self-addressed stamped envelope has been enclosed for you to return the brief, one-page questionnaire.

Your voluntary participation in this study will not only assist me with my graduate work at the University of Nebraska at Omaha, but also the results will be an asset for the Millard Public Schools as well. Thank you for your time, your interest, and your cooperation.

Your input is completely confidential and very valuable.

Sincerely,

Brian Begley

Brian Begley
English teacher