
This practicum was designed to provide elementary students from low-socioeconomic school communities equitable opportunities to use notebook computer technology in the communication process. A multi-dimensional staff development program was designed and conducted to integrate computer technology in the classroom. Students and their families were provided access to notebook computers through take-home workshops. A major component was developing collaboration and facilitating shared decision making through the establishment of site councils at each school. Ten solution strategies were developed that focused on empowering school communities to share decisions for computer use, thereby increasing student use of computer technology for the purpose of communication. Analysis revealed that involving the home, school, and community in the decision-making process for computer learning and providing schools with the tools, training, and support resulted in equitable opportunities for students to use the notebook computer as a tool for communication. Teacher and student surveys, an organizational scheme, agendas, several forms, and examples are appended. (Contains 48 references.) (TMK)
Providing Elementary Students
Equitable Access to Notebook Computers
By Empowering Three School Communities
In Shared Decision Making

by

Paula C. Despot
Cluster 44

A Practicum II Report presented to the
Ed.D. Program in Child and Youth Studies
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

NOVA UNIVERSITY
1993
PRACTICUM APPROVAL SHEET

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Date

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Approved:

10/12/93  
Date of Final Approval of Report  
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ABSTRACT


This practicum was designed to provide elementary students from low-socioeconomic school communities equitable opportunities to use notebook computer technology in the communication process. A multi-dimensional staff development program was designed and conducted to integrate computer technology in the classroom. To expand learning opportunities, students and their families were provided access to notebook computers through take-home workshops. A major component was developing collaboration and facilitating shared decision making through the establishment of site councils at each school.

The writer developed ten solution strategies focusing on empowering school communities to share decisions for computer use thereby increasing student use of computer technology for the purpose of communication.

Analysis of the data revealed that involving the home, school, and community in the decision-making process for computer learning and providing schools with the tools, training, and support resulted in equitable opportunities for students to use the notebook computer as a tool for communication.

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Signature Paula C. Despot
CHAPTER I
INTRODUCTION

Description of Work Setting and Community

The writer’s work setting was a large public school district located in a prosperous, growing, and diverse county. The school district serves a population whose characteristics over the years have changed dramatically. Once primarily an agricultural area, rapid commercial and industrial growth have given the county a new and strong economy. Many residents enjoy income levels that are above the national and state averages. Between 1980 and 1990, the county’s population grew by 13% and the census projections forecast this trend to continue. (Miller, 1993). With a student population of 67,725, the school district is among the 50th largest in the nation.

Among the 76 elementary schools in the district, three schools illustrated a profile of diversity that exists in the county school system. The three elementary schools are located in low-socioeconomic suburban communities. Many children residing in these areas come from families in the lower income to poverty strata range. The school communities are faced with many problems such as parents on military assignments, substance abuse, criminal activity, homelessness, public assistance,
limited home-school involvement, and female-headed households.

Table 1 shows each schools' socioeconomic, gender, and racial/ethnic data as compared to the school district. The number of students residing in these low-socioeconomic communities coupled with varying cultural backgrounds made these schools appropriate sites to provide elementary children equitable access to computer technology. The target population for this practicum was 136 elementary students, of whom 57 are in grade two, 53 are in grade three, and 26 are in grade five.
### Table 1

#### Demographic Profile of Student Population

<table>
<thead>
<tr>
<th></th>
<th>County</th>
<th>School 1</th>
<th>School 2</th>
<th>School 3</th>
<th>Target Population</th>
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<tbody>
<tr>
<td><strong>RACE</strong></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Caucasian</td>
<td>54,723</td>
<td>86</td>
<td>408</td>
<td>31373</td>
<td></td>
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<tr>
<td>African-American</td>
<td>10,808</td>
<td>416</td>
<td>176</td>
<td>15</td>
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<tr>
<td>Hispanic</td>
<td>773</td>
<td>7</td>
<td>17</td>
<td>5</td>
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<td>Asian</td>
<td>1,327</td>
<td>29</td>
<td>15</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Indian</td>
<td>94</td>
<td>1</td>
<td>0</td>
<td>0</td>
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<td><strong>TOTALS</strong></td>
<td>67,725</td>
<td>539</td>
<td>616</td>
<td>347</td>
<td>136</td>
</tr>
<tr>
<td><strong>GENDER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>34,942</td>
<td>268</td>
<td>311</td>
<td>179</td>
<td>73</td>
</tr>
<tr>
<td>Female</td>
<td>32,783</td>
<td>271</td>
<td>305</td>
<td>168</td>
<td>63</td>
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<tr>
<td><strong>SOCIOECONOMIC</strong></td>
<td></td>
<td></td>
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<tr>
<td>Chapter I</td>
<td>2,659</td>
<td>286</td>
<td>211</td>
<td>0</td>
<td>35</td>
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<tr>
<td>Free/Reduced Lunch</td>
<td>7,850</td>
<td>342</td>
<td>183</td>
<td>42</td>
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</tbody>
</table>
Two classroom teachers from each of the three elementary schools volunteered to participate with the writer in this practicum. The instruction provided by the six classroom teachers was supplemented by two full-time school-based reading teachers in two schools and a part-time reading teacher in one school. Additional instructional support was available from school-based guidance counselors, school-based media specialists, administrative assistants, and Chapter I teaching assistants. The three schools had access to services from one county resource teacher and one coordinator in computer technology.

One school was equipped with a 32-station IBM computer lab. A full-time computer lab technician and an instructional lab assistant facilitated the daily operations in the lab. Funding for the computer lab was made available through Chapter I. Consequently, its use was limited to Chapter I students.

**Writer's Work Setting and Role**

This writer is a reading specialist and holds the degree of Master of Science in reading education with an additional 30 hours of educational coursework. The writer has met state certification requirements in the areas of early childhood, elementary, and middle school education; reading; and administration and supervision. In addition to state requirements, the writer is a certified trainer for Individualized Language Arts, Dimensions of Learning (Marzano, 1991), Relationship Training, Teacher Expectations/Student Achievement (Kerman & Marti:, 1980), and Cooperative Integrated Reading and Composition. Some of the parental involvement workshops conducted by the writer include home-school reading programs, reading aloud, writing
process, effective communication skills, and conferencing strategies. In the area of staff development, the writer has delivered inservices on whole language; competency-based education; gifted, talented, and advanced programs; writing process; and computer technology. The writer has presented for numerous educational and community conferences including the International Reading Association Conference. The writer is affiliated with many professional and community organizations and is the past president of the local reading council.

Presently, the writer is a member of an interdisciplinary team representing reading and language arts. The writer’s responsibility is to support the instructional improvement and delivery of services to 19 elementary schools. Past employment experiences include being a resource teacher for gifted and advanced programs, a state liaison, a facilitator for state competency-based programs, a school-based reading teacher, and an elementary classroom teacher.
CHAPTER II

STUDY OF THE PROBLEM

Problem Description

As a language arts specialist, the writer became acutely aware of a problem involving equitable access to computer technology and instructional delivery of programs confronting the students, parents, teachers, and administrators at three elementary schools. The elementary schools within the school district had been provided limited direction and support in using computers to enhance fluency in oral, written, and visual communication of ideas; thus, computer usage by elementary school students varied among the three schools.

Although the school district emphasized the importance of providing students with experiences that will enable them to become knowledgeable users of computers, limited computer equipment was allocated to assist schools in meeting this challenge. As parents and other concerned citizens of the community realized the computer's potential for enhancing instruction, they vocalized the need for computers to be more accessible to students. Yet, meeting the demands of access placed increasing hardships on classroom teachers having an average of one computer per 30 students.

Teachers in the district were provided with curriculum guides for computer use
at the elementary level. The computer curriculum guides suggested a half hour of computer technology instruction with a half hour of independent practice per week. Instructional procedures for using the computer as a productivity tool were outlined in the guides. However, lesson design was left to the individual teacher and the specified time frames allowed precious little opportunity for students to fully engage in communication activities on the computer.

With one computer resource teacher for 76 elementary schools and one computer coordinator responsible for 113 schools in the district, staff support was practically unobtainable to many classroom teachers. Budget constraints kept staff development offerings at a minimum and the school district computer workshops charged teachers a fee. Often staff training occurred during a faculty meeting. Therefore, teachers lacked preparation, training, and experience in using the computer as a tool for communication. The school district promoted an instructional model of thinking emphasizing that learning is a complex process of constructing meaning. The development of communication skills was viewed as an essential goal of the learning process and each school was encouraged to incorporate listening, speaking, reading, and writing across the curriculum. Integrating computer technology into the model of thinking created new challenges for teachers, students, and administrators.

Along with the school district's increased attention to learning process development, state-mandated assessments required students to demonstrate their ability to communicate in grades three, five, and eight. These performance assessments reinforced the significance of developing the communication skills in the elementary
grades. Providing opportunities for students to engage in communication activities was critical in responding to the state accountability goals.

Schools in the district used strategic planning to assure equity and academic success for all students. Each school had a school improvement team responsible for developing student outcomes based on local and state curricular frameworks. Many school improvement plans at the elementary level did not reflect the use of the computer as a tool for facilitating the communication abilities of students.

All students need to have continuous opportunities to use computer technology for communication. However, for the purpose of this practicum, the writer elected to focus on a shared decision-making process. The process of shared decision making allowed each school community greater input and commitment in creating a plan for equitable computer access within the school. It was the writer's opinion that elementary students at the targeted schools were not being provided equal access to computers for the purpose of communication.

**Problem Documentation**

Evidence for the existence of this problem was supported by school reports, observations, questionnaires, and student work samples. At the beginning of the 1992-1993 school year, the writer assisted the teaching and administrative staff in an analysis of computer usage at each school. In an examination of the three elementary schools' improvement plans during October 1992, the writer noted that none of the three plans specified procedures or outcomes for using computer technology. As the three school principals formally and informally observed classrooms in the fall of
1992, they reported that elementary students were not using the computer for the purpose of communication.

Throughout November of 1992, data was collected on teacher and student use of computer technology. The six classroom teachers were asked to respond to a computer technology survey at the beginning of November 1992 (see Appendix A). The results of this teacher pre-survey confirmed that the six elementary teachers lacked adequate training, knowledge of computer software, and classroom access to computer technology. Students were also polled on computer use and computer availability (see Appendix B). Eighty-nine out of 136 students reported on a November student survey that they did not have a computer in their home. The writer reviewed 136 student work folders from the six classrooms during November 1992. This evaluation revealed no computer-generated work samples.

**Causative Analysis**

The problem of elementary students not having equal access to computer technology for the purpose of communication had seven major causes. A primary cause contributing to the problem was that the school staff lacked quality training, information, and ongoing support in using computer technology for the purpose of communication. Since computer literacy was neither a required course for teacher preparation nor a part of certification requirements for teaching, many teachers were insufficiently prepared to use computers and to instruct students on using the technology. The school districts' staff training in the area of computer technology was usually restricted to faculty meetings. The central office computer resource teacher,
responsible for rendering services to 76 elementary schools, had few opportunities to provide ongoing support to school staff. Effective computer planning with individual teachers was frequently a futile task due to compacted teaching schedules at the elementary level. While the classroom teacher struggled to cope with the many instructional and administrative directives required during the school day, little time remained to adequately develop computer skills.

A second cause of the problem involved the correlation between school goals and computer usage. Traditionally, school leaders had focused attention around local initiatives and were unaware of the relationship between computer technology and school goals. Computers were viewed by teachers and administrators as a supplement rather than an integral component of the instructional program.

A third cause was that the school community lacked input regarding computer usage for their school. While school staff had been instructed on strategic planning for school improvement, few schools in the district had embraced representational models of governance outside the professional circle. Parents, students, nonprofessional staff, and members of the community failed to be functional members of the school management team.

The fourth cause resulted from logistical procedures when using computer technology in schools. Issues, such as the location of computers in the school building, maintenance, security, and storage, impacted access and availability to computer technology. These important considerations protected the financial investment and the integrity of the computer program.
The fifth cause pertained to teacher attitude and perceptions toward computer technology. Teachers were the fundamental element to successfully implementing computer technology in the instructional program. Their comfort level with the computer directly influenced usage in the classroom.

The sixth cause centered on utilization of the computer in the elementary classroom. Frequently, teachers tended to use the computer to reinforce basic skills. Drill and practice exercises in reading and math comprised the majority of software for elementary learners. Computer technology was not used as a tool for communication in the elementary classroom.

The final cause dealt with the issue that computers were not accessible to students on an active and equitable basis. Many times students were only allowed to use computers as a reward when they finished their assigned seatwork or if a parent volunteer worked with them. Only students identified as Chapter I were provided access to the computer lab and received instructional assistance from the computer lab technician.

Relationship of the Problem to the Literature

A review of the literature indicated that elementary students are not provided with equitable opportunities to use computer technology. The inequities that existed among computer usage at the elementary school level were depicted by Janey (1989), Bruder (1992), and Branscum (1992). Other literature gave evidence to the problem created when elementary school students were not given opportunities to use computers in the communication process.
One issue from the literature involved how computers were used in schools. By studying the data on computer usage, Reinking and Bridwell-Bowles (1991) concluded that computers were not being used as an integral component of the instructional program at the elementary school level. Purcell (1992) believed that issues of computer accessibility and affordability made the process of teaching students to use the computer as a learning tool extremely difficult.

Another issue focused on equitable computer use. DuBois and Schubert (1986) indicated that computer access and learning inequities were perpetuated by socioeconomic status and gender discrimination. The Equity in Technology Project described by Richman (1990) assessed the problem of computer equity into four categories of minority, gender, economic status, and handicapping disability. Kondracke (1992) outlined the ineffectiveness of computer implementation in schools according to ethnicity, socioeconomic status, and geographical location. He displayed the disparity in computer usage among the affluent and economically disadvantaged students, the white and minority students, and the midwest and southern students.

The problem of computer use in schools had world-wide impact. Borrell’s (1992) commentary suggested that computer implementation in elementary schools demonstrated the inequities in the American educational system. He claimed America's present technological course has created a stratified school system of those that have and those that have not. Piller (1992) discovered that computer usage in poor school systems continued to foster inequities in American education. He found school districts lacked training, resources, support, and maintenance to effectively help
students use computers. In an international view of the problem, Cassagne and Iiyoshi (1992) reported that many countries initially lagged behind the United States regarding computers in schools. Recent information from France and Japan pointed to technological advances exceeding the United States. These countries had well-defined technology goals, officials in leadership positions to implement technological changes, updated hardware and software, mandated funding, flexible attitudes toward computer use, and encouragement for students to become more productive members of society.

The literature revealed several causes for the problem. Although the federal government promoted the use of computers in the classroom, Kondracke (1992) contended that there was no overall plan to guide the role of technology in education. What was missing was a vision for technology and detailed planning.

The most significant factor preventing schools from using the computer effectively was teacher training (Scrogan, 1990). Bitter and Yohe (1990) maintained that successful infusion of computer technology into educational programs depended on teacher competence in using the computer. However, few instructional delivery models existed to adequately prepare teachers for using technology. Baskin (1985) cautioned perspective computer trainers to be sensitive to the differences and experiences of educators learning how to use computers. Often attitudes conveyed by the adult learner impede the learning process.

Yau (1991) proposed that computers can enhance students' communication skills if the teacher was actively involved in the process both as a facilitator and instructor, sufficient hardware and software was available, and the teacher was
provided with continuous support and training. Katzer and Crnkovich (1991) listed four drawbacks to computer usage: the establishment of a predictable environment with respect to computer property, the limitation of the numbers of computers available for student use, the decision of who uses the computers, and the consideration of the location for the computers.

Inequities in computer learning described by DuBois and Schubert (1986) were caused by establishing irrelevant prerequisites to computer learning, inappropriately locating computers in places that prohibit or limit access, reluctance or inability of teachers to provide computer instruction, and accepting common assumptions regarding equitable computer learning. Lastly, Martin (1986) emphasized that effective use of technology was limited by the "high cost of equipment, the need for training, the lack of fit between new and existing materials, and burdensome logistical problems, including storage, availability, and safety" (p. 33).
CHAPTER III
ANTICIPATED OUTCOMES AND EVALUATION INSTRUMENTS

Goals and Expectations

The following goals and outcomes were projected for this practicum. The goal of the writer was that students at the three elementary schools have equal access to notebook computers for the purpose of communication. This goal included understanding the role that communication plays in the learning process and the role technology can play to enhance communication. It is the belief of this writer that comprehensive knowledge of the learning process and computer technology will lead to increased computer access in the elementary classroom.

Expected Outcomes

The writer had five specific outcomes to achieve during the implementation period of this practicum. The first outcome empowers members of the school community to be active participants in the decision-making process for computer technology in their school. Each elementary school will establish a site-based council to guide the effective implementation of notebook computer technology. Throughout the implementation period of this practicum, the three elementary school site councils will meet. They will develop an instructional plan for using notebook computers in
the communication process.

The next outcome validates that students are given continuous opportunities to interact with notebook computers in the classroom setting. Teachers will learn how to facilitate classroom environments to allow students increased access to notebook computers for a variety of communication activities. Following student and teacher practice with the computers in the classroom, the three principals will observe elementary students using notebook computers for the purpose of communication a minimum of one time in each of the six classrooms.

The third outcome addresses the issues of staff training and support. At the beginning of the school year, the teacher pre-survey conducted by the writer confirmed that the six elementary teachers needed extensive staff development and ongoing support in computer usage. At the conclusion of the school year, the writer will survey the six classroom teachers (see Appendix C). This post-survey will indicate that the six elementary teachers will have developed adequate computer training, knowledge of computer software, and increased classroom access to technology.

The fourth outcome is to assure that the students receive computer access for the purpose of communication. Students will be provided experiences using notebook computers in communication-related activities in the classroom. During the implementation period, 100 out of 136 students will create a final computer-generated product demonstrating the ability to communicate for appropriate audiences.

The final outcome will increase the opportunities for students to use notebook computer technology. At the end of the school year, the students and their families
will be invited to participate in a computer program. Twenty-four students will be given an opportunity to take notebook computers home through a program offered in the summer.

**Measurement of Outcomes**

The first outcome of this practicum provided a visible work plan to build home, school, and community involvement. A framework for computer usage was developed through local site councils. The writer used documentation to measure this outcome. At monthly site council sessions, school community members worked together to establish a system for equitable use of notebook computers. The school action plans provided evidence that instructional procedures for computer use were based on student outcomes. The three elementary school plans served as documentation that instructional plans for using notebook computers in the communication process were designed during the implementation of this practicum.

As a contributing member to the site-based council, each principal had a vested interest in ensuring that students were involved with the notebook computers. An observation by the school principal served as the measure that students had been given opportunities to use the computers. The principals watched students as they engaged in communication activities using the notebook computers.

The technique used to measure the effectiveness of providing computer training and ongoing support for the teaching staff was a questionnaire. Each elementary teacher completed a survey at the conclusion of the school year. The post-survey was open-ended and focused on computer training, computer materials, and access to
notebook computers in the classroom.

Assuring equitable computer access was measured by the student’s completion of one computer-generated product. Students created a final product that demonstrated their ability to communicate for an appropriate audience. Opportunities for increased access to the notebook computers was measured through attendance records kept during the summer computer program. As students and their families participated in the summer session, documentation of attendance was maintained by the computer instructor.
CHAPTER IV
SOLUTION STRATEGY

Discussion and Evaluation of Possible Solutions

Elementary children at the targeted schools did not have active and equitable access to computers for the purpose of communication skill development. The literature offered an array of possible solutions to facilitate communication skills when using computer technology. By using computer technology for reading and writing activities, Anderson-Inman (1991) discovered that classrooms became stimulating environments for communication. To improve student performance, Hill (1992) recognized that computer technology must be integrated with sound instructional practices. Teachers and students needed adequate time to interact with the technology and equitable access to computers. One innovative solution to increase access to computers was promoted through the use of portable technology. Byers (1991) and Greenfield (1991) detailed the advantages of using a notebook-sized computer. Madian (1992) advised that successfully integrating computer technology into instruction demanded coordination of resources including teachers, staff development, curriculum, and technology, along with well-planned decisions based on the needs of students and teachers.
Poirot (1992) stressed that every technology project should begin with quality staff development focusing on the integration of computers into daily instruction. Miller-Souviney and Souviney (1987) guided computer trainers on how to use technology to motivate students, to support the writing process, and to reinforce classroom writing practices.

The benefits of peer tutoring and collaborative writing when using computers with young children were praised by Baron (1991) and Heap (1986). One computer writing project engaged students in purposeful reading, writing, and thinking (Stratton & Grindler, 1991). In this project, elementary students produced a published book representing a means of personal communication.

Goodspeed (1992) offered strategies to help students in reading and writing by creating joint activities for parents and children to work cooperatively using computer technology. Marvelle (1992) pointed out how important it was for the home, school, and community to share in computer learning. He explored various ways educators can use computer technology to help students, teachers, parents, and community members become partners in the educational process.

Riel (1989) noted that computers were effective tools for restructuring education if joined by effective teachers. Reigeluth, Annelli, and Otto (1992) also viewed technology as a catalyst for school restructuring. They suggested the implementation of technology in schools be organized into three stages involving planning, training, and institutionalization.

In preparation for using technology in schools, Finkel (1992) described general
guidelines being developed through centralized management with operational procedures occurring through site-based management. The use of site-based management was supported by Hanson and Liftin (1991). They stated that the best strategy for successful solutions in educational programs was to seek input and commitment from the people involved.

Fowles and Wilder (1991) noted that assessing the effects of computer usage in schools was a difficult process. A uniform evaluation plan did not work. They devised a list of domains and performance indicators that helped to assess the implementation progress in the areas of application and use of computer technology.

Several other ideas needed to be explored by the writer. Staff development was essential for program success and should be a blending of knowledge of the communication process and computer instruction. An option for training teachers could be a workshop scheduled during the summer. To expand teachers’ knowledge of technology and open new opportunities for learning, staff could explore the exciting world of telecommunications.

Like the teachers, the elementary students needed support as they embarked on this new technological adventure. Student computer use could be bolstered through peer tutoring. The six classrooms could exchange computer-related products developed by the students.

Another means to increase equitable access to the computer is through the recruitment of mentors. A mentoring program could be established by the guidance counselors at the schools. Mentors could serve to encourage young girls and minority
children to actively use the computer for the purpose of communication.

Parental involvement could occur during family nights where families and students come together to use the notebook computers. Another idea allowing more access to the notebook computers by students and their families, could be initiated through a take-home computer program. Increasing access to computers while strengthening the home-school bond could be accomplished through offering a summer computer program to students and their families. To demonstrate the advantages of notebook computer technology to educators, parents, and other members of the community, a technology fair could be held.

**Description and Justification for Solutions Selected**

There were ten solutions the writer chose to implement. The writer would serve as a resource to the classroom teachers on Marzano’s (1991) Dimensions of Learning model. The emphasis would center on the integration of communication skills in the learning process. Components of the Dimensions of Learning model would be implemented in the elementary classrooms. The Dimensions of Learning model would provide the framework for helping students become constructive learners and encouraging teachers to refocus instruction on the student. Communication skills would be emphasized using a holistic perspective. Understanding the learning process and the kinds of thinking would enhance the partnership between teacher and student; thereby, enabling students and teachers to have greater flexibility for using computer technology in the classroom.

The writer would arrange for staff development on using notebook computers
for the purpose of communication. The staff development would provide the six teachers with adequate training and ongoing support. During staff training, the teachers would be exposed to telecommunications. The writer would facilitate opportunities for the two teachers at each site to engage in peer coaching. This would allow the teachers to refine and extend their use of notebook computer technology and to observe for equitable student use of the computer. In addition to staff training and support, the writer would coordinate planning efforts among school-level personnel (assistant principals, guidance counselors, reading teachers, media specialists) and district-level personnel (computer specialists, curriculum specialists, instructional leadership specialists) for successful computer integration into the instructional program.

A critical component in this practicum was to elicit support from teachers, administrators, other school staff, parents, and members of the community. Therefore, the writer would take a leadership role in facilitating a shared decision-making process at each school. Site-based councils would assist in developing the logistical procedures for using notebook computers in the classroom.

Another solution that the writer would attempt was to have students use computer technology to produce a final product that addresses one of the purposes — to inform, to persuade, or to express personal ideas. A technology fair would highlight using the notebook computer as a tool for communication. The writer’s final solution would provide increased opportunities for computer access through a summer take-home computer program.
There are several reasons why these solutions would be successful. One reason is that school administrators have been trained in the strategic planning process. A second reason is the goal of this practicum is supported by the school communities and district-level personnel.

Another important reason is that schools throughout the district are adopting the Dimensions of Learning model. Teachers would be planning, designing, and assessing instruction based on five types of thinking. Marzano (1991) described the interaction of these types of thinking as the dimensions of learning. Classroom experiences would be developed around positive attitudes and perceptions of learning, acquiring and integrating knowledge, expanding and refining knowledge, using knowledge meaningfully, and developing productive habits of the mind. The writer participated in the state training and would serve as a trainer of trainers in the Dimensions of Learning model for the identified schools.

The willingness of the teachers to work with the writer is also a reason contributing to the implementation of this practicum. The writer is aware that teachers are critical to the success of the program. The six teachers volunteered to participate. Every effort would be made to allow sufficient time and ongoing support and training as they use the notebook computers in their instructional program.

A major reason influencing student success in this practicum is that authentic computer-related experiences would replace drill and practice exercises. As evident in the November 1992 student survey, all students selected to participate are highly motivated to use computers. An additional reason is that many parents in the school
communities have articulated the need for students to have more access to computers.

National, state, and local initiatives would impact the success of this practicum. Instruction is being redirected with many outcomes focusing on the learning process and supporting the use of technology. Through shared decision making, teachers, students, and members of the community would have more input into computer use within their schools. Finally, the school district recognizes the need for computer technology. An October 1992 long and short range plan completed by the superintendents' staff called for the increased use of computer technology to support instruction.

Report of Action Taken

This practicum was shared with the acting assistant superintendent of instruction, the district computer coordinator, school administrators, and classroom teachers. The writer was a contributing member to each school's site council and served as a resource for the school principals and teachers.

A critical step in the implementation process was the governance provided through site councils. Initially, the writer assisted each school administrator in establishing a site council. Although the number of members varied from school to school, each site council was a representative model of the school community. The cadre of members was selected from the many diverse groups that comprise the school. Members were charged with making decisions for the improvement of the total school, regardless of the group they represented. Figures 1 through 3 illustrate size, representation, and governance structure of each site council.
Figure Caption

Figure 1. Representational governance model of school one.
Figure Caption

Figure 2. Representational governance model of school two.
Figure Caption

**Figure 3.** Representational governance model of school three.
Once the councils were organized, a full-day workshop on site-based management was provided by the writer and other professional staff. All members of the three school's site councils attended this meeting. During the morning session, council members engaged in shared decision-making activities and consensus-building exercises. In the afternoon session, hands-on demonstrations with the notebook computers and discussions facilitated by the school district's computer coordinator and the writer, allowed each site council to determine action plans for utilization of notebook computers within their school communities. Based on previous training on total quality management, site councils were encouraged to adopt an organizational framework of plan, do, check, and act (Finn, 1992). This organizational scheme helped schools draft their action plans for the notebook computers (see Appendix D). Strategies for computer staff development and logistical procedures for using the notebook computers in the school were explored with the central office computer staff and the site councils. The workshop concluded with the site councils setting schedules for their monthly meetings and determining procedures of operation.

The first responsibility performed by the site council members was to communicate the information learned at the site-based management workshop with their colleagues. During school faculty meetings, members explained their role, described their function, and clarified their relationship to other groups such as the faculty council and the school improvement team.

At monthly site council meetings, members planned for equitable computer usage that was realistic and attainable for their school. Council members addressed a
variety of issues based on the needs of the school community. Some of the agenda topics included discussing management and security issues, establishing location and electrical outlet sources for the computers, identifying school staff for additional technology support for teachers, planning for external and internal communication, supporting a peer coaching model, acknowledging student and teacher accomplishments, addressing equity issues, designing a technology fair, assisting students and teachers in the development of a final computer project, and implementing procedures for a summer take-home computer course.

The site councils recognized that communication was key to efficient and effective operation. Site councils devised ingenuous strategies to elicit communication among the school community. One school made an elaborate display in the school media center highlighting the notebook computer program. The display was accessible to parents, students, and staff members. The display housed agenda request forms, noted in Appendix E, and minutes of past meetings. Another example of ongoing communication among site council members was the monthly agenda (see Appendix F). The monthly agenda permitted members a means of input regarding future topics for discussion. Near the conclusion of the school year, one school gathered comments on the operation of the site council using the form found in Appendix G.

A major consideration in implementing this practicum, was the financial investment and the intended use of the notebook computers and portable printers. The writer worked with the site councils and the central office computer staff to set up a computer environment in each school that addressed security, safety, and preventive
maintenance. The school staff located equipment in locked areas, arranged classrooms to safely accommodate the young users while limiting damage to equipment, organized the computers for maximum student use, and avoided problems by developing troubleshooting procedures. The central office computer resource teacher, a school media specialist, and the writer barcoded notebook computers and printers for added security. For ease of student and teacher use, the writer color-coded and numbered each computer, printer, adapter, extension cord, and surge protector assigned to the six classrooms. Serial numbers were also recorded. The central office computer teacher loaded software programs into the harddrive of each computer and developed written procedures for using the notebooks, accessing the software, and operating the portable printers.

Another essential element of this practicum was adequate staff development in computer technology. At the beginning of implementation, the writer presented a holistic overview on computer technology and its correlation to the Dimensions of Learning model for each school staff. At these faculty meetings, the notebook computers were shared with school staff by the writer and the decision for usage within the school building was explained by the site council. Classroom teachers, supported by school-based reading teachers, were encouraged to design lesson plans around the five dimensions of learning and instructional technology.

Throughout the implementation period, the six classroom teachers were provided with four half-day training sessions on notebook computer technology. The writer teamed with the computer resource teacher, the computer coordinator, a staff
developer specializing in peer coaching, and the school-based reading teachers to plan a high quality staff development program. The first training session was an orientation to the notebook computer. Teachers were supplied with general information about the notebook computer by the writer. Appropriate software for the purpose of communication was demonstrated. The computer resource teacher modeled and gave guided practice using *Children's Writing, and Publishing Center* (Learning Company, 1989) and *Bank Street Writer III* (Bank Street College of Education, 1986). The teachers were asked to keep a written journal of their experiences while using the notebook computer. Each teacher left the first session with an assigned notebook computer allowing them a chance to reinforce their newly acquired computer skills at home and increase their comfort level with the computer.

At the next three computer sessions, teachers were given ample opportunities to review additional software, plan for management in the classroom, network with colleagues, develop thematic lesson plan designs, and discuss issues of equity and access, share ideas for student products, and review research on using computers. The computer resource teacher was extremely patient and provided the six teachers with individual assistance, continuous backing, and technical advice. At the second staff training session, some difficulties with the hardware caused a delay and the day's schedule had to be adjusted. The computer teacher volunteered to spend an additional session at each school with the two teachers. Comments from the teachers regarding this school-based session were highly positive and reflected how this small group session truly addressed their learning styles.
The two classroom teachers at each school collaborated to further support and refine their use of notebook computer technology. The second computer training session included a demonstration of the peer coaching model by a central office staff development resource teacher. Teachers scheduled three observations with their co-teaching partner after they began using the computer with their students. All six teachers completed three peer coaching observations using the peer coaching form in Appendix H.

The telecommunications component was explored by the writer, the computer coordinator, and the computer resource teacher. Due to the lack of dedicated phone lines and the amount of time devoted to other software needs of the participants, telecommunications was discussed with the six classroom teachers as a possibility for next year.

Once the teachers became comfortable with the technology, they began to introduce its use to the students. Teachers developed innovative systems for organizing students and initiating instruction. Two teachers from one school trained a core of six students in their classrooms. These six students served as coaches and leaders for other students in the classroom, thus eliminating the need for students to constantly interrupt instruction when problems arose. Another teacher discovered that when students had knowledge of the keyboard and its functions, they performed their communication tasks easily. This teacher designed exercises for children enabling them to grasp basic operational computer concepts quickly (see Appendix I). Lesson plans focused on using the computer as a communication tool for various audiences.
New and exciting activities for students emerged. The computer activities ranged from classroom newsletters to want ads for the community. Students also completed a project for display at the technology fair. All teachers maintained recordkeeping procedures that charted the number of times each student spent on the computer and the different activities they accomplished.

Following the peer coaching observations completed by the two teachers, each school principal observed notebook computer use in the classrooms. The writer suggested that the principals request assistance from the central office computer resource teacher for any teacher requiring extra help. However, all principals saw teachers and students enthusiastically using the notebook computers and none felt the need to ask for additional service.

Near the end of the school year, a technology fair was held involving all three schools. The fair was hosted by the army post in a picnic area that was tented. Over 600 parents, students, educators, community members, business leaders, and government officials watched intently as students demonstrated their acquisition of computer technology and proudly displayed products they had accomplished using the notebooks. Banners and visual exhibits decorated the lovely area. Preregistration for the summer session was disseminated at the fair.

As the school year drew to a close, teacher input on the implementation of the technology program was collected. The six teachers completed a survey focusing on three components of the program: training, knowledge, and use of the notebook computers. The writer shared an overview of the evaluations with school principals.
Preparation for the summer computer program followed the closing of the school year. The computer office checked-in and prepared the notebook computers and printers for use at the summer session. Preliminary registration for the summer program was held and an estimated number of participants for the summer session was determined. As summer began, registration continued to be publicized by the news media. Due to the large numbers of families from each school wanting to participate, two summer workshops were planned. The workshops were geographically located for participants and scheduled for five consecutive half-day sessions. The writer met with the two computer instructors to outline procedures for handling the management and security of the take-home computer equipment and to review the objectives for the summer course. A release form was developed by the writer and the central office to ensure family responsibility for the loan of the equipment (see Appendix J).

The summer computer session opened with an introduction and orientation to notebook computer technology. The student often took on the role of teacher while family members engaged on communication exercises using the notebook computer. The sessions concluded with a homework assignment for students and family members. By taking the computers home daily, the participants were provided additional opportunities to practice and reinforce their computer skills. The instructors assessed family involvement through a pre- and post-evaluation. Following the summer program, the writer met with the computer coordinator and the school principals to get feedback on the number of participants from each school and to explain the types of activities that occurred during the summer program.
The new school year began with midcourse revisions on the computer technology action plan at each school. The writer met with the central office computer staff and the school administrators to review each school’s action plan. Site council meetings were scheduled and opening agenda items included evaluation information from staff training and the summer computer course. At the first site council meeting, each council examined their original technology plan for outcomes met and made modifications or revisions for the school year. The experience of providing students with equitable opportunities to use notebook computer technology was discussed and the information learned throughout the implementation of this practicum was shared with each school’s faculty and central office staff.
Results

The general setting for this practicum was a large, suburban school system while the specific setting was three elementary schools. The three schools were selected based on their diverse socioeconomic student populations. The problem which was solved through this practicum was that elementary students have not had equal access to computer technology for the purpose of communication. The strategies chosen by this writer to solve this problem focused on empowering school communities to share decisions for computer use within their schools thereby increasing the use of computer technology for students. Collaboration was established among teachers, administrators, support personnel, community members, and students to restructure the schools towards site-based management. A multi-dimensional training program was implemented to help teachers incorporate computer technology in the classroom. To expand learning opportunities outside the classroom, students and their families were provided access to computer technology through take-home summer computer workshops.

The outcome measures were as follows:
Outcome Measure 1: Three out of three elementary school site-based councils will develop an instructional plan for using notebook computers in the communication process. At the site-based management workshop, the three site councils drafted plans for using notebook computers within their school. Instructional plans were refined and expanded during the monthly site council meetings. The plans guided each school program. At the start of the new school year, the schools made modifications or adjustments to their plans based on the outcomes of this practicum. Outcome 1 was achieved.

Outcome Measure 2: Three out of three principals will observe elementary students using notebook computers for the purpose of communication a minimum of one time in each of the six classrooms. The three principals reported that they observed elementary students in the classrooms integrating notebook computer technology with the Dimensions of Learning model. They indicated that students and teachers were enthusiastic and extremely motivated by the technology. Most importantly, the principals stated there was a marked increase in the use of computers by students and teachers in the instructional program. Outcome 2 was achieved.

Outcome Measure 3: Six out of six teacher surveys completed at the end of the implementation period will indicate adequate computer training, more knowledge of computer software, and increases in classroom access to technology. As the school year closed, the six teachers completed the end of the school year survey. Appropriate standards for assessing the dimensions of computer training, software, and access were determined. The writer specified criteria incorporating nine aspects of the
computer program. Table 2 summarizes the results of the evaluation survey using an analytic scale.
Table 2

Analytic Scoring Results of the Teacher Notebook Computer Survey

<table>
<thead>
<tr>
<th>Scoring Criteria</th>
<th>Total score points</th>
</tr>
</thead>
</table>

**Computer training dimension**

1. Noted a sufficient amount of time allocated for teacher training. 5
2. Used language to convey an increase in information on computers. 6
3. Felt comfortable using the notebook computer. 6

**Software dimension**

1. Explored software for the purpose of communication. 6
2. Indicated software was developmentally appropriate. 6
3. Made a positive correlation between software and curriculum. 4

**Access dimension**

1. Regarded notebook computer easily available for teacher/student use. 6
2. Sought alternatives in scheduling for teacher/student use. 4
3. Perceived use of computer as valuable. 6

**Note.** Number of teachers completing the survey = 6.

0 = dissatisfied, no response, or no evidence, 1 = satisfactory response.
In addition to the end of the year survey, evaluations were collected at the conclusion of each staff development session. The last training evaluation completed by the teachers was done via the notebook computer (see sample in Appendix K). Collectively, these evaluations confirmed the teachers’ increase in knowledge and confidence using notebook computers. Based on the analytic criteria established for the end of the year survey and the staff development session evaluations, outcome 3 was achieved.

Outcome Measure 4: One hundred out of 136 students will create a final computer-generated product demonstrating the ability to communicate to appropriate audiences. The computer fair highlighted the wide range of products produced by the students. Ever since the notebooks introduction into the elementary classrooms, the teachers encouraged the students to graph the number of opportunities they had on the computer. The information collected by the writer indicated that every child completed a minimum of one computer product demonstrating their ability to communicate to appropriate audiences. Outcome 4 was achieved.

Outcome Measure 5: Twenty-four students will be given an opportunity to take notebook computers home through a program offered in the summer. The schools registered 32 students and their families for the summer notebook computer program. All 32 children, accompanied by one or more family members, completed the take-home computer program. Outcome 5 was achieved.
Discussion

The specific outcomes which the writer planned to achieve were met through the implementation of this practicum. The goal of this practicum was to increase opportunities for elementary students to use computer technology as an appropriate means of communication. The goal was achieved by providing technical assistance and professional support to three school communities enabling them to make their own decisions regarding computer use based on their needs.

Three areas relating to the goal of the project were analyzed through the data. Adequate staff training and ongoing support were ascertained through the teacher surveys. Equitable access to notebook computers for the purpose of communication was determined by student's work, principal's observations, and summer attendance records. Increasing school, home, and community involvement in the decision making process was outlined in the school plans. The process of site-based instructional decision making, combined with the availability of state-of-the-art computer resources and professional support, paves the way to prepare students to meet the demands of a technological society. Thornburg (1992) reminds educational leaders that concentrating solely on access to computers will not transform education. However, the alignment of educational goals, support, and access has the capacity to positively reshape the educational system.

Increasing access prompted this writer to pioneer the utilization of notebook computer technology in educational programs. The use of portable notebook computers expanded learning opportunities for students in their regular classrooms and
in their homes. Many students who previously did not have access to computers were afforded the chance to employ this technological resource.

The critical component contributing to the success of this practicum was the planning and decision making by people who shared in the delivery of services to students. Using the suggestion offered by Blythe and Gardner (1990), the writer assisted the schools in enlarging "the circle of responsible individuals" beyond professional staff to provide elementary students equitable access to computer technology (p. 36). Epstein (1991) found that many schools believe in the importance of community involvement, but few are able to successfully develop or administer plans for partnerships. The Center on Families, Communities, Schools, and Children's Learning (Davies, Burch, & Johnson, 1992) suggests caring for children requires consideration for the family. That, in turn, necessitates reaching out to the community.

The three elementary schools involved in this practicum attempted to engage families, communities, and schools in the instructional decision-making process for the benefit of students. Parents, community residents, students, and support personnel were invited to be contributing members on the school's site-based council. These site councils functioned as representatives of their schools and as facilitators of educational decisions.

The operation of the site-based councils was unique to each school. Although all principals willingly committed to work with the writer on this practicum, it became very evident that the schools were on a continuum in the process of shared decision
making. From the start, one school enthusiastically embraced the concept fully. The principal of this school willingly accepted the idea of shared decision making and allowed staff to have control over decisions. The decisions began with a specific action plan for computer technology and later developed into broader purposes for issues affecting the school. At the start of the new school year, the school improvement team was replaced by the site council as the decision making body for the school. The council’s new function exceeded instructional decision making. Responsibilities that confronted the council ranged from dealing with school discipline to cut-backs in teaching positions. Since its inception, this site council took on many leadership roles within their building. The chairperson, a pre-kindergarten teacher, was elated when asked to serve as a consultant to the central office in the area of site-based management.

Another site council elected to have the custodian as a member. An extremely influential person within this school community, the custodian had voiced many negative remarks regarding using computers with young children. However, once empowered as a member of the council, she became one of the strongest proponents for computer technology. The custodian helped the council solve many of the electrical problems and other logistical concerns associated with using state-of-the-art technology in an old, unequipped school building. Although this council tried to develop more influence, members expressed the need to have the permission of the two administrators before moving ahead with decisions.

At the beginning of implementation, the third council struggled with making
decisions and needed a lot of guidance from the writer. The reading teacher was appointed by the principal to serve both as chairperson and secretary. Already overwhelmed by other administrative demands, the reading teacher conducted the meetings in traditional ways. Often new ideas were discouraged which resulted in limited input evolving from members. As the year progressed, the writer saw a gradual shift and movement towards more shared decision making by this council. This occurred as new leaders emerged and took a more active role, thus lessening the need for reassurance by the writer and removing the workload from the reading teacher.

Reflecting on the issue of school governance, the writer draws an analogy to the patterns of parenting identified by Baumrind (Skolnick, 1986). On the one side of the continuum is the authoritarian parent exercising control similar to centralized school decision making. The opposite end of the continuum is the permissive parent with limited control. Balancing power in the middle is the authoritative parent. The authoritative parent shares power while shaping autonomy. The goal of school governance should strive to be like that of the authoritative parent.

Guthrie and Reed (1991) explain that there are three areas to consider in educational administration. First, schools are expected to be free of politics yet responsive to public clients. Second, schools need to be sensitive to national needs yet subject to the desires of local citizens. And third, schools should be controlled by lay persons while staffed with professionals. School policies and practices should reflect the values of equality, efficiency, and liberty if education is to serve society well.
Families and educators need to learn to be responsive to these value dimensions. One way to be responsive to the value dimensions is through the process of empowering school communities as participants in shared decision making. Dimidjian (1989) states "the partnerships that family and school can build in the early years can and should be lifelong, strengthening the social fabric of the nation" (p. 58).

Much like the operation of the site councils, the six teachers were also in various stages of their expertise and comfort level with notebook computer technology. Therefore, the staff development program necessitated creative planning to ensure all participants were challenged and provided with learning that was commensurate with their needs.

The training component of this practicum mirrored the fundamentals outlined by Finkel (1993) for a successful staff development model. First, the computer training plan involved a precise strategy of identifying school computer leaders and assessing their skills and interests in computers. Second, a training infrastructure was developed that included site-based leaders. The infrastructure represented a switch from the traditional districtwide or faculty meeting format. Small group, individual assistance, and peer coaching occurred with agendas that specifically were developed to meet the school community needs. Credible instructors modeled use of the technology and offered built-in support at the building level. Two of the six teachers that were trained became instructors for the summer take-home computer workshop. The third fundamental involved training that advocated teaching computer technology within the context of the Dimensions of Learning framework. Teachers were able to
view the computer as an essential tool to communicate productively. Finally, the plan allowed teachers to increase their own access time and integrate their learning by taking the computers home.

Many other exciting initiatives occurred as a result of this practicum. Teachers, students, and family members viewed the notebook computer as a natural extension of learning. The six teachers embraced the computer in their classrooms and commented that its use positively affected the quality and quantity of student writing. Many family members also expressed to the writer that their ability to communicate improved by using the notebook computers.

Another outgrowth was the enthusiasm surrounding notebook computer technology. Prior to the implementation of this practicum, the school district computer coordinator had voiced many barriers to notebook computers. However, once experiencing the power of notebook computer technology, the computer coordinator became extremely involved in the staff training and willingly offered to model strategies and techniques for the teachers. Consequently, a number of notebook computers were purchased at the district-level. Lately, resource teachers and administrators can be seen using this new technology in their daily performance.

Other interest was fostered when the writer’s local board of education requested information on notebook computer technology. Following an hour-long presentation, board members scheduled individual visits to the schools and received training on the computers by the students.

After the site-based management workshop, the local newspapers covered a
story regarding the innovative use of notebook computers in the school communities. This, too, generated much interest among the public and caused inquiries requesting additional information.

Another resourceful idea that emerged during implementation was the Student-Teacher Exchange Program (STEP). STEP was developed by the county computer resource teacher as a means for teachers and students to share ideas. Products generated by students or teachers were saved onto a disk and sent to the computer resource teacher. Copies were made and distributed to the other classrooms participating in this practicum.

A final impact of this practicum centered around the technology fair. The site councils were instrumental in forming a number of government and business partnerships. Local restaurant establishments donated enough food and supplies to treat participants to a picnic at the fair. Other businesses honored the program by contributing special student and teacher incentives. Some of the businesses gave money to provide bus transportation to the site. Having a deep commitment to technology in education, the army post’s commanding officer agreed that the fair would be hosted outside by the military. Three school communities were joined together in celebrating the technological advantages of notebook computers. While surrounded in colorful banners and artistic displays, students and teachers proudly demonstrated the ability to use notebook computers. Perhaps the best testimony of the success of this project is shown in a letter written by a second grade student to the First Lady. The letter clearly demonstrates a young child’s growth in writing and
vividly explains the motivational influence of the notebook computer (see student letter in Appendix L).

In summary, elementary children do need equitable access to computer technology in preparation for meeting the challenges of the future. By giving local school communities the power to chart their technological course and providing teachers access to computers, training, and support, students will be given equitable opportunities to strengthen their communication skills as evidenced by this practicum.

**Recommendations**

In making recommendations about implementing a project such as this, it is essential to begin with understanding and developing a model of school site governance. Foremost is eliciting members of the school organization who are willing to collaborate and take responsibility for decisions at the school. Hanson and Liftin (1991) emphasize that an open climate of trust and support must permeate the school. Individuals need to pool their resources and work together in a proactive manner to achieve their goals. It was the writer's finding that the school principals' belief and practice in the shared decision making model was fundamental to the successful operation of the site council.

Another key element is to focus on adequate staff development and technical assistance prior to implementation and throughout the duration of the project. Scrogan (1990) reports that adopting computer technology is a complex process. A training program requires skillful infusion of computers into instruction, thereby ensuring application of the technology. Only through comprehensive training, continuous
support, and ongoing communication were the school communities empowered to make use of the computers as a tool for learning.

**Dissemination**

The results of this practicum report have been disseminated using a variety of sources. Project outcomes were presented at the local level during school faculty meetings, principal's meetings, a central office director's meeting, and a local board of education meeting. At the state level, the information was shared by producing a computer multimedia-videodisc presentation. This videodisc highlighted teaching strategies and captured the intense involvement of students and family members using notebook computer technology.

The writer organized a number of presentations showcasing the comprehensiveness of this project for state and local educational organizations. Results were given by attending conferences at local and state reading councils, state computer associations, and state literacy groups.

Other means of disseminating the success of this project was through the use of the student computer-generated products. Students developed classroom newspapers and distributed them to their school community. The articles explained the project and noted the students' excitement in using notebook computers.

Another example of dissemination was presented through the displays of student products featured at the technology fair. The displays superbly captured the work accomplished by students and teachers. After the fair, the displays were circulated among the numerous business partnerships that were formed. By viewing
the multitude of student work-samples, local residents were given first-hand knowledge about the project.

Local media coverage abounded during the implementation of this project. Newspaper articles accounted the various stages of this project from the establishment of site councils to the involvement of families with notebook computers. Another source that reported project information was done by the superintendent’s staff writers. A full page commentary noted the project’s successes to people across the county.

Throughout this practicum, the writer communicated the success and implementation of the project via computer telecommunications. Much information continues to be shared via networks established using this powerful communication medium.

Further plans to disseminated the results of this practicum include submitting proposals to regional and national education and business conferences. Included in the list of conferences are plans to submit proposals to the International Reading Association and the International Society for Technology in Education. Finally, the writer intends on preparing articles for publication. The writer anticipates publishing some of the barriers and successes captured as recorded in the writer’s practicum log.
REFERENCES


Finn, D. (1992, November). Total quality management. A lecture presented to Anne Arundel County Public Schools, Annapolis, MD.


COMPUTER TECHNOLOGY SURVEY FOR TEACHERS

1. What experiences do you have with computers?

2. How do you feel about using the computer?

3. Have you ever taken a computer course? When? Where?

4. Do you have a computer at home? If so, what kind?

5. Approximately how many computers are available in your school? What types are available and where are they located?
Do you have computers in your classroom? If so, how many?

6. Are you familiar with any word processing programs? Which ones?

7. Are you familiar with any other computer programs? Which ones?

8. Do you think knowledge and use of computers by teachers are important?
   Why or why not?
   For students? Why or why not?

9. Do you think using the computer will impact the way you teach writing?
   If so how?

10. Do you think using the computer will impact student writing? If so how?
APPENDIX B

STUDENT PRE-SURVEY
1. How do you feel about writing?

2. How do you feel about using a computer?

3. Do you think you are a good writer? Why or why not?

4. What does a good writer need?

5. What things would you like to write about?

6. When and where do you write?

7. Do you like to write alone or with a friend?

8. Do you have a computer at home?
APPENDIX C
TEACHER POST-SURVEY
Teacher Notebook Computer Survey

After using notebook computers in your classroom, please discuss your views on:

I. The computer training that was provided. (Please address the amount of time, the information you learned, and your present comfort level regarding the computer.)

II. The computer software that you used with your students. (Please discuss the software you selected, whether you felt it was developmentally appropriate, and its correlation to curriculum.)
III. **The access of computers in your classroom.** (Please discuss availability, scheduling, and computer usage for both you and your students.)
APPENDIX D

ORGANIZATIONAL SCHEME
PDCA

ACT
Accept the change permanently or run through the cycle again.

PLAN
Plan a change or a test aimed at improving a process.

CHECK
Check the results of the trial and determine next step.

DO
Carry out a trial of the improvement on a small scale.
APPENDIX E

AGENDA REQUEST FORM
S /TE BASED COUNCIL

AGENDA REQUEST FORM

NAME ___________________________________________ DATE _______________________

ISSUE TO BE ADDRESSED: __________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

DISPOSITION OF REQUEST: ____________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

TIME GRANTED TO PRESENT: ____________________________ MINUTES

REVIEWED BY:

1. __________________________________________________________

2. __________________________________________________________

3. __________________________________________________________

4. __________________________________________________________

DATE REVIEWED ______________________________

68 75
APPENDIX F

SITE COUNCIL MONTHLY AGENDA
SITE BASED COUNCIL MEETING

Monday, April 19th
(2:45 - 3:45 P.M.)

I. Introductions
II. Reading of March minutes
III. Publicity Committee Report
IV. Discuss Recognition Committee
V. Present Mission Statement
VI. Report on progress of 704th Partnership
VII. Report on May 22nd Celebration
VIII. Agenda Request Team for May
IX. Sharing Information/New Business

Issues to be addressed next meeting:


Next meeting will be:
DATE: May 17th
TIME: 2:45
PLACE:

Thanks for participating!
APPENDIX G

SITE COUNCIL INPUT FORM
Help Us Grow! Bi-digester needs your input to produce more in the future.

I didn't like: 

One thing that would really help me:

If I were running the council:

Something to add next year:

Any more good advice or ideas:
APPENDIX H

PEER COACHING FORM
Coaching Form

PRE-OBSERVATION CONFERENCE

Discussion (To be led by the teacher with the coach as a sounding board)
This may include:
- The comfort level of the teacher with the skill to be practiced
- Previous experiences with the skill/behavior (both positive and negative).

This should include:
- A description of each skill/behavior to be observed
- Desired outcomes (for both students and teacher)

The Contract (To be led by the coach):
- List the specific teacher behaviors I should watch for:

Teacher Behavior

Student Behavior/Response

THE OBSERVATION

Directions: During the lesson, record what the teacher does or says that illustrates the agreed upon skills to be practiced. (Remember: Focus ONLY on the skills to be practiced!)
POST-OBSERVATION CONFERENCE

Discussion:
This may include:
- How the teacher felt about the lesson in general
- How the teacher felt about what happened as the focus areas were practiced

At all times, the coach must remain non-judgmental.

This MUST include:
- Sharing the written feedback (What ACTUALLY occurred)

Brainstorming Session (If requested by the teacher)
Directions: Teacher and coach should list additional ways of achieving the desired student outcomes.

Future Plans (As applicable)

Expression of Appreciation (Both Teacher and Coach)

(Coaching Forms are the property of the teacher being observed.)

To climb steep hills requires a slow pace at first. (William Shakespeare)

Together is better (and a bunch of other people)
APPENDIX I

BASIC COMPUTER OPERATIONAL CONCEPTS
GETTING THE CHILDREN READY FOR THE COMPUTER.

1. GIVE CHILDREN KEYBOARD DITTO.
2. INTRODUCE IMPORTANT KEYS.
   * CURSOR
   * SPACE BAR
   * BACK SPACE
   * DELETE
   * ESCAPE [ESC]
   * SHIFT
   * F1-F6
3. MAKE UP DRILLS (10 sentence each)
   * DRILL 1-CHANGING CAPITALS
     EX. 1. I think viola swamp is mean.
   * DRILL 2-SPACING-FORWARD /BACK
     EX. 1. The catran after the bird.
   * DRILL 3-DELETE
     EX. 1. The dog caen ruen faste.
   * DRILL 4-SENTENCES FROM DRILL 1,2 AND 3.
*DRILL 5- SAVE ON A DISC/CHECK
(TYPE A PARAGRAPH, CHILDREN COPY/SAVE/CHECK)
*DRILL 6- CHOOSING PICTURES.

4. DO KEYBOARDING USING THE TWO POINTERS.
5. CHOOSE 2 OR 3 CHILDREN FROM EACH READING GROUP TO BE A COACH-TRAIN
6. START BY HAVING CHILDREN TYPING EVERYTHING IN CAPS.
7. AT BEGINNING KEEP IT SIMPLE.
   *POEM
   *NEWSPAPER ARTICLE
   *FRAMED PARAGRAPH
8. SET UP A SCHEDULE.
APPENDIX J

STATEMENT OF RESPONSIBILITY
STATEMENT OF RESPONSIBILITY

Name: _______________________________________

Address: _______________________________________

Phone Number: _______________________________________

I, ________________________________________, have been assigned by the

Librex 386SX Notebook Computer, number __________

and adapter number ____________.

I agree to take the assigned computer home each night and return it the next day starting on ____________________________

and ending on ____________________________.

I understand that I am responsible for the assigned equipment during the stated times. I, further, pledge that I will exercise the utmost care while entrusted by the

to use the equipment.

Parent/Guardian Signature _______________________________________

Student Signature _______________________________________

Date _______________________________________
APPENDIX K

TEACHER NOTEBOOK COMPUTER EVALUATION SAMPLE
1. What was the most successful aspect of the session?
The sharing of ideas and feedback. We also got some new ideas to share.
2. The least successful?
I thought it was all beneficial. I am really enjoying being involved with this project.
3. Why?
We need to get back together from time to time to share ideas and get questions answered.
4. What insights have you gained as a result of the session?
I am realizing that I am on the right track with my class. I have been frustrated by how slow I feel I have been plodding along, but now I think I am doing pretty well.
5. What changes might these insights encourage your make?
I feel more able to refine my organizational skills and continue in that mode. Thanks!
APPENDIX L

STUDENT LETTER SAMPLE
Dear Mrs. Clinton,

Do you know that the laptop computer fair is coming Saturday May 22, 1993? We have laptops in our class. We get to do special things. Mrs. Clinton I heard you like education and I know you are a nice President,s wife. I know a President is the leader of our Country, Company, or other groups and not all countries have presidents. You are nice to the world. Please come to our Laptop Computer Fair.

From,

2nd grade
Elementary