

**THE DEVELOPMENT OF A TELECOLLABORATIVE PROGRAM
FOR AN ADULT LEARNING COMMUNITY:
A CASE STUDY OF THE
PROGRAM PLANNING PROCESS**

**A Dissertation Submitted to the Faculty of the
College of Education
In Partial Fulfillment of the Requirements for the Degree of
Doctor of Education**

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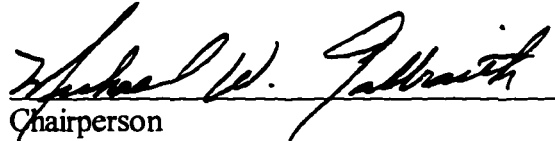
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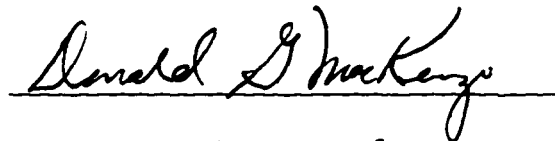
by


Alicia Christine Miller

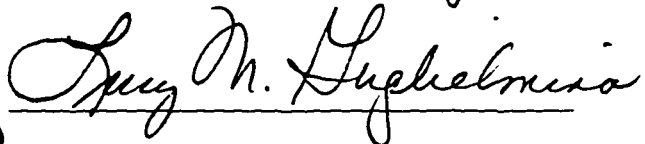
This dissertation was prepared under the direction of the candidate's dissertation advisor, Dr. Michael W. Galbraith, Department of Educational Leadership, and has been approved by members of her supervisory committee. It was submitted to the faculty of The College of Education and was accepted in partial fulfillment of the requirements for the degree of Doctor of Education.

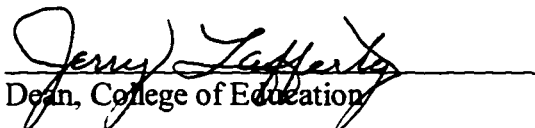
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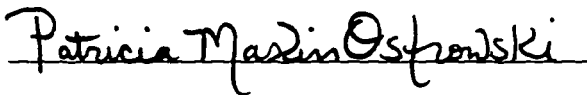

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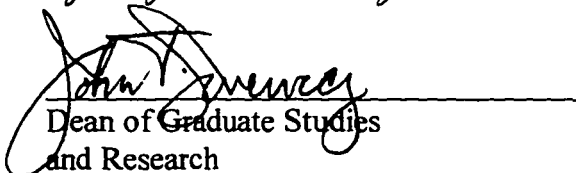


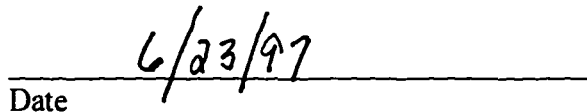

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Completing the doctoral degree represented an educational journey into a new life. On this journey I felt surrounded by encouragement, support, understanding, humor, and love by professors, friends, and family. I would like to express my gratitude for their belief in my abilities that enabled me to realize my goal.

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ABSTRACT

Author: Alicia Christine Miller

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The purpose of this study was to describe and analyze the program planning process used for planning technology programs for the South Consortium of Schools and of two member schools. This study sought to understand power and interests of the planning community and how they influenced the program process.

A qualitative multi-case study design was used and the primary sources of data were interviews, document analysis, and researcher participant and nonparticipant observations. The sample of thirteen included a cross section of school personnel, parents, and community business partners.

Findings were grouped into to three categories, program planning community, program planning process, and negotiations of power and interests. Program planning communities were influenced by a national challenge to improve technology in the schools and by partnerships developed with parents, communities, and businesses. Factors critical

to the planning process emphasized the importance of (a) having adequate time and information, (b) developing viable planning models addressing considerations of power and interests relationships, and (c) having effective managers and leaders. Program planning objectives focused on the acquisition of equipment versus integration of technology in the curriculum. Negotiations were the main practice of planning conducted by those in power who focused on meeting specific planning objectives. As a result of these findings, it was concluded that forming partnerships enhanced the program planning process, program planning models addressing negotiation of power and interests were not fully developed before planning began, and program planning attention was focused primarily on acquisition of equipment rather than integration of technology into curriculum.

To Pam and Jay

Embrace each day with its changes and chances

with a grateful and happy heart

knowing that your life is in God's hands.

Also, in loving memory of Jeff who dedicated his life to working with youth

and to my mother who encouraged me to be a life-long learner.

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CHAPTER 1

INTRODUCTION

The information highway is paved with promises of uniting the world as a global community. As Pritchett (1996) suggests, "The Department of Labor estimates that by the year 2000 at least 44% of all workers will be in data services - for example, gathering, processing, retrieving, or analyzing information" (p. 2). We are in the information age and the economy is shifting from industrial age production to an age where services and information are highly valued (Drucker, 1980; Naisbitt, 1982; Spear & Mocker, 1989; Toffler, 1980). Educational institutions are challenged to keep up with the rapid information age changes to prepare future workers for the 21st Century. The information age worker will need job expertise and mental skills of differentiation, recognition, synthesis, and abstraction to assimilate and manipulate information (Spear & Mocker, 1989). The traditional teachers' paradigm of the teacher imparting knowledge to the learner will be compromised with the increased use of technology. "The new tools becoming available are now rapidly changing the way we work, the way we teach, and the way we learn" (Gore, 1997). Students will be able to gather information with or without the direction of a teacher or the confines of a classroom (Hale, 1995; Lewis, 1989).

The following comment from a community school administrator emphasizes the challenge that educators face today in preparing students to meet the information age workforce.

I know we are here to teach them English, but everything they do now, even operate a washing machine, has a computer in it! A gentleman came to my house from UPS. He could hardly speak English, but he had learned how to operate a keyboard pad. He had to type a program where I signed and approved the package delivery. They need to know how to use a keyboard, type their name and information. Pretty soon checking and banking will all be done by computer. So I don't feel like it's an advantage anymore. I think it is going to be a necessity to be able to use a computer.

How can educational planners transform schools using blackboards and chalk into world-wide communication centers? This is an important question to consider.

Knowles (1986) projected a vision of information age educational services "delivered electronically by teleconferencing, cable and satellite televisions, computer networks and other means yet to be discovered" (p. 621). Educators are excited about transforming classrooms but are faced with meeting demands of increased student numbers and student diversity with continually stretched resources. The business world is interested in working with educational centers to prepare learners to meet the changing job demands of the new information age worker. The new effort to move education into the information age requires educational planners to rethink the paradigm of the traditional classroom. Planners also need to have the knowledge to integrate educational and technological needs to make intelligent decisions about long range plans for the use of new technologies.

By the year 2000, all schools in America have been challenged to connect every classroom and library to the Internet (Gore, 1997). This challenge is to use new

technologies and the information superhighway to improve education and increase economic competitiveness. To meet this challenge, indicatives have been advocated for all schools in the nation to develop and maintain written plans for integrating technology in the educational curriculum (U.S. Department of Education, 1995; Council of Chief State School Officers, 1994).

Problem

Schools are forming technology committees in hopes that their programs will be propelled to the cutting edge of technology. Given the importance of effective program practice in producing quality technology programs, the program planning process becomes critical. Educators have been enticed with the promise of money, as mentioned in the *Technology Literacy Challenge Fund* to “use new technologies to improve the schools” (U.S. Department of Education, 1997, p. 2). However, as one administrator in this study stated, “It feels like we have been handed money and not a lot of anything else to go on. And really not a wise plan to make this system make sense -- no protocol, no models.” This study addresses the need to have well-planned models for developing technology programs.

The models or plans provided by the nation and school districts are focused on completing specific tasks such as objectives, goals, budget, and evaluations. Also advocated is involvement of students, parents, and businesses to form partnerships to accomplish the goals. Funding agencies, however, do not offer program planning assistance on how to address power and interests of those involved in the process. Therefore, this study is an attempt to understand power and interests of the planning

community and how they influence the program process. In the following section the theoretical viewpoint that informs this study is presented.

Theoretical Perspective

The theoretical perspective that informed this study had three dimensions. The first dimension presented three views on program planning practice. The second dimension related to making program planning decisions based on negotiating power and interests of the planning community. Understanding the structure of planning communities as an influence on the planning process was the last perspective.

Three accounts describing program planning processes and what planners do in practice are termed classical, naturalistic, and critical viewpoints (Cervero & Wilson, 1994, 1996; Forester, 1989; Schubert, 1986). The classical viewpoint has been the dominant program planning framework since it was first proposed by Tyler in 1949 (Posner, 1988; Schubert, 1986). The classical viewpoint focuses on a traditional planning model using specific linear program planning tasks to produce predetermined results (Brookfield, 1986; Cervero & Wilson, 1994; Sork & Buskey, 1986; Sork & Caffarella, 1989).

The naturalistic viewpoint expands on the classical perspective by the recognition that planners are real people trying to make the best decisions about what action to take in certain situations (Cervero & Wilson, 1994; Knox, 1980). Thought is given to who is to be served, what activities are to be planned, and what resources are available. Rather than following a linear set of tasks, the program plan is in constant revision (Houle, 1972).

The conceptual framework for describing and analyzing the program planning processes in this study is viewed through the lens of the critical viewpoint. This perspective is grounded in critical social science theory (Carr & Kemmis, 1986; Cervero & Wilson, 1996; Forester, 1989; Freire, 1970). From this perspective, the operational definition of program planning practice as employed in this study is a social, political, and ethical activity involving the negotiation of multiple interests in an environment of both enabling and constraining factors (Cervero & Wilson, 1996; Forester, 1989; Mills, Cervero, Langone, & Wilson, 1995). Program planning studied in this light may explain the gap between what planners say they are going to do and what they actually do in practice (Argyris & Schon, 1978; Cervero & Wilson, 1994).

This study was one way of describing and analyzing the program process beyond conducting technical program planning tasks. Viewing program practice through the critical theory lens provided a way to understand power and interests of the planning community and to view how negotiations were conducted. The intent of this study was to increase awareness and understanding of everyday program planning practices.

Statement of Purpose

The purpose of this study was to describe and analyze the program planning process used for planning technology programs for the South Consortium of Schools and of two member schools using naturalistic observations, interviews, and document analysis resulting in a case study. The South Consortium of Schools is defined later in this chapter and will be further referred to in this study as the Consortium or the Consortium of Schools. The primary question in this study was, What is the program planning process

used to develop technology programs as influenced by negotiating power and interests within the planning environment? Specifically this study sought to determine the program planning process, power and interests influences, and how those power and interests were negotiated.

In developing an effective technology program, planners may discover a need to understand the relationships of the planning community beyond conducting program tasks. The critical perspective allows planners a view of the process that suggests that planning does not follow linear tasks. Rather, the process is a negotiation of multiple power and interests of a planning community. This study serves to give educational technology planners that view to help in improving and understanding the program planning process.

Definition of Terms

The terms that will be discussed and defined in this section are technology, technology program planning process, collaboration, telecommunication, telecollaboration, consortium networks, the South Consortium of Schools, planning communities, and critical program planning model. Other terms that may need to be defined will be explained as they appear in the study.

Technology as used in this study describes equipment or tools such as computers, phone modems, software, or network wiring. Instructional technology is using the tools of technology for teaching and learning. *Technology program planning process* means a process used by schools to organize the decision making procedure. The planning process helps determine what technology programs are needed and what is necessary for the accomplishment of those programs. This definition is further clarified for this study by

stating that those technology programs developed in this study were the basis for building collaborative networks through telecommunication.

Collaboration is a mutually beneficial and well-defined relationship entered by two or more organizations to achieve common goals. The individuals who represent collaborating organizations are called partners.

Telecommunication is the transmission of electronic signals as either text, images, or data between two or more computer systems. Four general telecommunication applications are network, information retrieval, electronic mail, and electronic bulletin boards.

Telecollaboration is an new term emerging from the use of telecommunication to strengthen an educational collaboration or partnership. In this study the 20 Consortium schools and partners were striving to build a telecollaboration network to achieve common educational goals.

Consortium networks are voluntary associations in which individuals from a variety of jobs, classes, and personal perspectives participate out of enlightened interest. They consist of people who tackle a problem from different vantage points, can exchange different points of view, and who can find strength in challenges. The result of a consortium of schools is eventually directed at improving students' experiences and learning.

The South Consortium of Schools, one of three cases in this study, is a nonprofit organization that provides a network of personal, professional and technological services for the support of 20 schools in five school districts. The South Consortium of Schools, a

pseudonym, will be further referred to in this study as the Consortium. The Consortium focuses on professional development and networking to the adult leadership of school staff, parents and business and community supporters. Two of the Consortium's member schools, Banyon Community Middle and Central Palm Community Middle were the other two cases in this study. The two schools, also pseudonym's, will be further referred to in this study as Banyon and Central Palm.

Planning communities are all those actively involved in the technology program planning process. In this study the planning community included Consortium administration, five school districts, 20 member schools, teachers, administrators, students, parents, businesses, universities, and other community members.

The critical planning model is described as a non-linear, flexible plan to meet demands of a specific planning situation. Planning is likely to be a cooperative effort between multiple planners with multiple power and interests. Negotiation of power and interests are conducted within the program planning tasks of assessing needs, determining objectives, selecting content or methods, developing action plans, managing programs, and evaluating programs. A successful program does not necessarily depend on the presence of all of the tasks in all program planning situations (Caffarella, 1994; Cervero & Wilson, 1994; Sork & Caffarella, 1989).

Significance of Study

This study of the program planning process is significant for several reasons. First, it allows planners an understanding of the planning process not offered in any other descriptive study of technology program planning practices found in the literature. From a

theoretical perspective, this study seeks to explain why program planners do not follow, in actual practice, the planning process they say is going to be used. Recognizing and understanding how power and interests of a program planning community are negotiated will add logic to the current theoretical perspectives on how technology programs are planned. Lastly, through a description and analysis of current planning practice, this study seeks to inform other technology program planners how constraints of the planning community can be recognized and negotiated by the planner to accomplish the goals of carrying out successful technology programs to improve teaching and learning.

Delimitations of Study

The following are descriptions of the population studied to which generalizations may be safely made (Locke, Spirduso, Silverman, 1993). Participants in this study were drawn from the planning community of the Consortium and two community middle schools, also part of the Consortium. The population and sites studied were participants, locations, and activities involved in a program planning process for technology development.

Limitations of Study

Qualitative research assumes that the “world is a function of personal interaction and a highly subjective phenomenon in need of interpreting rather than measuring” (Merriam, 1988, p. 177). Qualitative research inductively builds theories from the collection of data and is influenced by the biases and assumptions of the researcher, who is the primary instrument for methods of data collection and analysis to establish reliability, validity and generalization (Guba & Lincoln, 1981; Merriam, 1988). Limitations of this study were that it was conducted by one researcher who was the primary instrument of the

study. This researcher was limited by certain biases and assumptions as presented in Chapter 3. The program planning processes were limited in the amount of time each committee had been organized. The Consortium was in the first year of operation. Central Palm's committee had been in operation for three years with the same chairperson. Banyon's technology planning committee had a newly appointed chairperson and was in the process of being formalized. This study was limited to one planning process of the total school facility, technology.

Summary

The focus of this study is how power and interests of planning communities influence the practices of schools in planning technology programs. Technology planning committees are being formed in districts and schools to meet the nationwide challenge to implement technology into the classrooms. Program planners have been offered a classical model of program planning that focuses on technical tasks. Program planning is a complex and dynamic process and responsible planning involves understanding of the social context of the planning community where power and interests of the planners are negotiated. The remainder of this study is concerned with reaching the purpose of describing and analyzing the program planning process for the Consortium of Schools and of two member schools. In doing so, an increased awareness of everyday program planning practice is offered.

Chapter 2 provides a theoretical framework for studying the program planning community, power and interests, and negotiations. A case study methodology, as described in Chapter 3, was used as the research strategy. Chapters 4, 5, and 6 present

the findings of the study from data obtained from interviews, observations, and data analysis. The findings in Chapter 4 describe the program planning communities. In Chapter 5, the art of program planning is described. Negotiations of power and interests as related to the theory of bonded rationality are presented in Chapter 6. Chapter 7 offers conclusions, recommendations, and implications for further research.

CHAPTER 2

THEORETICAL PERSPECTIVES

The review of theoretical foundations was conducted to understand the framework of program planning within the context of negotiating power and interests in a planning community. The purpose of this study was to examine the program process used by the Consortium of Schools and by member schools and to analyze how the process was influenced by negotiating power and interests of the planning community. The purpose of this chapter is to review relevant literature on program planning viewpoints, negotiation of power and interests, and communities within which the planning occurs.

The first section of this chapter presents an overview of classical, naturalistic, and critical viewpoints of program planning. The theoretical basis for this study on program planning described as “a social activity in which people negotiate personal and organizational interests” (Cervero & Wilson, 1994, p. 4) is established in the critical viewpoint. The critical viewpoint section includes an overview of the theory of bonded rationality, power, and interests. This portion concludes with a comparison of the three viewpoints.

Continuing the premise that program planning is conducted within the social context of an organization, the next section presents concepts of communities as described

by geography, interests, functions, and values. The chapter concludes with a reflective summary of theoretical perspectives of program planning.

Program Planning Viewpoints

Planning has been defined by Alexander (1986) as “what planners do” or more precisely as:

The deliberate social or organizational activity of developing an optimal strategy of future action to achieve a desired set of goals, for solving novel problems in complex contexts, and attended by the power and intention to commit resources and to act as necessary to implement the chosen strategy. (p. 41)

A review of program planning literature reveals that traditional planning theory is dominated by a rational, comprehensive or scientific paradigm of planning (Alexander, 1986; Boone, 1985; Friedmann, 1988; Pennington & Green, 1976; Sork & Buskey, 1986). A growing body of pragmatic and empirical evidence suggests the existence of a gap or incongruity between theories-of-action described as espoused theories of program planning and theories-in-use (Argyris, 1993; Argyris & Schon, 1978).

As explained by Argyris and Schon (1978), theories-of-action help explain how planning groups manage in real-life situations. They specify actions to take, consequences that follow, and values governing the planning process. One type of theory-of-action is the espoused theory. This theory is espoused, talked about, and comprises planners’ beliefs, attitudes, and values. Espoused theories rarely vary in any planning situation. The four governing values of espoused theories are “to achieve your intended purpose; maximize winning and minimize losing; suppress negative feelings; and behave according to what you consider rational” (p. 52). Action strategies that are prevalent in this model

include promoting the planner's situation, analyzing the thoughts and actions of self and others, and thinking about causes for problems. The gap in planning occurs when the real planning, theories-in-use, begins.

Theories-in-use are the actual theories used in daily program planning practices (Argyris & Schon, 1978). The mismatch, also termed gap, results when planners face "real-life, nonprogrammed, difficult, and threatening situations" (Argyris, 1982, p. 85). Rarely do planners take the time to fully design a program plan that includes how to anticipate negotiation in actual planning practice. When these constraints occur, the planners behave incongruently with the espoused theory. Argyris and Schon (1978) propose that it is a crucial skill of planners to discern this planning gap of espoused and theory-in-use before the planning process begins. They suggest that planners should go into a planning process with a plan that is not too rigid nor vague, but one that allows the planners flexibility to produce learning while acting so that the gaps can be filled effectively with the cooperation of others. A knowledge of the viewpoints of program planning is beneficial for planners to formulate effective theories-in-use.

Classical Viewpoint

Planning from the classical perspective is described as a rational process or series of analytical decision steps or phases that involve the learner in determining program needs, developing program objectives, selecting and organizing instructional plans, implementation, and program evaluation (Cervero & Wilson, 1994; Forester, 1989; Mills, 1993). Walker (1971) describes the classical model as prescriptive, a means-end. It postulates a desired end (objective), a means for attaining this end (learning experience)

and a process (evaluation) for determining whether the means does cause the end. The classical model assumes a planning process entails a certain sequence of steps, all of which are interrelated and interdependent (Pennington & Green, 1976). Prominent among these steps are the processes of originating the idea, developing the idea, making a commitment, developing the program, teaching the course, and evaluating the impact. The authors determined that planners use classical model language to label planning actions. This generic model of program planning is consistent with the one synthesized by Sork and Buskey (1986) in their review of adult education program planning literature. Four significant classical program planning models proposed by Tyler (1949), Knowles (1970), Boone (1985), and Boyle (1981) will be described in the next section.

Tyler's (1949) model was significant in that it provided the framework for most adult program planning theories. In *Basic Principles of Curriculum and Instruction*, Tyler presented a way to view instructional programming. He suggested a rationale for analyzing and interpreting curriculum organized around four main questions: "1) What educational purpose (objectives) should the organization seek to attain?; 2) How can learning experiences be selected that are likely to be useful in attaining these objectives?; 3) How can the selected learning experiences be organized for effective instruction?; and 4) How can the effectiveness of these learning experiences be evaluated" (p. 1)? In an explanation of his model he suggests that education be an active process involving the efforts of the learner. He advocates that education be related to matters of interest to the learner in order to involve active participation in the learning process. Tyler prescribes that models of planning be flexible to permit modification considering needs, interests, and

abilities of any group. The steps of program planning offered by Tyler were expanded upon by Knowles' (1970) model based on the andragogical assumption of self-direction.

Knowles (1970) offers a planning model similar to Tyler's. Each was a proponent of the adult as an active participant in the learning process and felt that the learner needed to have satisfying practical experiences within their personal realm. Knowles' five program planning stages of climate-setting, participative diagnosis of needs, definition of objectives, and learning experience compare with Tyler's organization of curriculum. The foundation for Knowles' model is based on the andragogical assumption that adults move toward self-direction, use their experience as a learning resource, are ready to learn according to sociodevelopmental tasks, and want immediate application of learning. The format of the andragogical model is a process design that is different from the content plan in the pedagogical model (Knowles, 1970). A dual role assigned to the facilitator is that of designer and manager of processes and secondarily, a role of content resource. Instead of one model, as proposed by Knowles, Boyle (1981) offers an eclectic and pragmatic approach to program planning.

Boyle (1981) presents program planning as an opportunity for addressing the continuing demand for lifelong learning. He defines planning development as "a deliberate series of actions and decisions through which representatives of the people affected by the potential program are involved with a programmer . . . to plan a program that will contribute to improving the health of the people and their community" (p. 5). Boyle's continuing education model includes fifteen concepts in areas of planning, designing, implementing, and evaluating to be used as a guide in the selection of the most appropriate

planning procedures for a particular type and level of program. In these steps are such concepts as analyzing the problems and needs or concerns of people and communities and also determining intellectual and social development levels. Boyle determines program needs by identifying an imbalance in an organization that suggest a need to be satisfied. When this need is satisfied, a reduction in tension occurs and equilibrium is restored to the organism. Boyle summarizes that “program development is essentially the art of designing and carrying out a course of action to achieve an effective educational program” (p. 42). Boone (1985) however, suggests that Boyle’s approach to programming does not lend itself to any one theoretical model, but is based on several assumptions regarding the role of planned change in program development. Boone developed a model that was a conceptual framework for adult education program planning.

Boone (1985) describes programming as a proactive process that always looks toward the future. In his book, *Developing Programs in Adult Education*, Boone suggests seven philosophical tenets of programming. The first is adult educators must be grounded in the basic beliefs about adult education to guide them as change agents and programmers. This suggests a proactive role for the planner. The second suggests that planning programs are a beginning to an ideal situation. Improvement of societal conditions through responsible planning may be a result of this assumption.

Understanding the philosophies of social and behavioral sciences is the next premise. The fourth is that planners should understand the environment within which programs are planned. This supports the idea that program planning is organizationally embedded. Knowledge about collaboration between the provider and the user is another premise.

Planners must be able to translate needs of learners into program design. This translation of needs into a program affects behavioral changes in the learner. The final tenet promotes evaluation of programs to see if the objectives have been met and if a desired change has occurred in the learner. Boone suggests that planning is a complex process, uniquely designed for each situation, judgmental based on values of the planner and learner, and one that promotes social improvements. Boone's model is comprehensive and reflects the familiar language of the classical viewpoints.

Classical theorists introduce a program planning process that is based on Tyler's programming concerns of purpose, content, methods, and evaluations. Sequential program planning tasks are described in the language of originating the idea, developing the idea, making a commitment, developing the program, teaching the course, and evaluating the impact. Philosophies include the learner as self-directed and as an active participant in the process. Important to the classical theory is the ability of the programmer to identify needs and to understand the philosophy, objectives, roles, and relationships of the organization. The naturalistic viewpoint expands on identifying needs and understanding the organization to include how to place planning in complex, changing environments.

Naturalist Viewpoint

Naturalistic planners are real people making judgments about how to plan in a particular situation (Knox, 1990). Primary emphasis is on the planner's ability to make judgements in a specific context and to justify them (Cervero & Wilson, 1994). Program planning tasks move from classical sequential steps to a complex interaction of planners

making judgments on the “right course of action in a specific situation” (Brookfield, 1986, p. 245). Programming planning choices are made based on who is to be served, what activity is to be planned, and what resources are available (Houle, 1972, 1996). The model that most depicts the naturalist viewpoint is developed by Houle.

The assumptions on which Houle bases his model of program planning differ from the linear fashion of the classical viewpoints. Houle (1972, 1996) takes into account that the analysis or planning of educational activities must be based on the realities of human experience and upon their constant change. He stresses that the program designer must constantly reshape program plans caused by changes in the abilities and desires of the participants and in the resources available. From beginning to end, program planning is in constant revision and should be based on decisions that are a series of going back and forth over program considerations. Houle presents a two-part system of program design consisting of two complementary actions. The two parts are examination of the situation in which the learning activity occurs and the application to this situation of a framework or model of planning. Houle’s model includes six planning components of identifying educational activity, deciding to proceed, identifying and refining objectives, developing an educational format, fitting the format into the life setting, and evaluating. Houle stressed, “The quality of any particular program depends in large measure upon the wisdom and competence of the person making the choices” (Houle, 1972, p. 223). Naturalistic planning is bound by context, but negotiating those relationships is not addressed as in the critical viewpoint. The critical viewpoint also expands on the classical and naturalistic model to suggest political relationships in planning contexts (Cervero & Wilson, 1994).

Critical Viewpoint

The critical viewpoint program planning process involves planners making practical judgements and actions in a socio-political environment of bounded rationality and differing power relationships (Cervero & Wilson, 1994; Forester, 1989). This view is grounded in critical social science and the writings and thoughts of the Frankfurt School, especially those of Jurgen Habermas (Carr & Kemmis, 1986; Cervero & Wilson, 1994; Forester, 1989; Freire, 1970; Schubert, 1986). From this perspective, planning practice is an organizationally embedded, technical, political, and ethical social process involving the negotiation of multiple interests and the interpretation of moral and ethical values in an environment of both enabling and constraining factors (Mills, Cervero, Langone, & Wilson, 1995). The critical viewpoint is the theory used as a framework for describing and analyzing program planning practice in this study.

Characteristics of the critical viewpoint theory that separate it from the other planning models include distinct moral standards by which program planners abide so that a planner “openly takes sides in the interest of struggling for a better world” (Giroux, 1983, p. 19). Critical theory is praxis in nature, “informed action which, by reflection on its character and consequences, reflexively changes the knowledge-base which informs it” (Carr & Kemmis, 1986, p. 33). Critical theory is also political in nature and is described by Schubert (1986) as a form of study that “integrates political action with intellectual inquiry in search of understanding and justice” (p. 314). Significant critical viewpoints include those of Freire (1970), Forester (1989), and Cervero and Wilson (1994).

Freire (1970) suggests a critical pedagogy based on liberating the poor, oppressed peasants in northeastern Brazil. Freire approaches literacy development and adult education with an inductive model that evolves from a praxis of thought and action in which learners begin to “question, analyze, and act upon their world, the end result being liberated from oppression” (Boone, 1985, p. 28). Planning steps such as meeting with groups to discuss aims, calling for volunteers, locating origination of contradictions, decoding communication, and continuous evaluation include a reflexive pattern of analysis and active exchange or praxis. Friere’s main program planning emphasis is the liberation of people by helping them find their voice which has been suppressed by existing structures that promote social inequality. Whereas Freire’s life work targets program planning for the oppressed, Forester (1989) provides a framework for the study of daily planning practices and the basis for the critical theory used as a focus for this study.

Forester’s (1989) approach to the inquiry of program planning is aimed at informing theory and improving practice also described as “emancipatory action research” (Carr & Kemmis, 1986, p. 53). Forester presents the concept of bounded rationality that suggests that program planning be organizationally embedded and constrained or bound by the given setting or context. He suggests that programs are planned by people, not by theories. According to Forester, planners are in a social and political organizational environment and must exercise technical, practical, and critical judgement in making program planning decisions. This environment produces both instrumental results and reproduces social and political relations of knowledge (who knows what), consent (who accepts whose authority and who resists), trust (who has established networks of

cooperative contacts), and the ways we formulate problems (who considers which issues and neglects which others) (Giddens, 1979; Habermas, 1979).

Forester (1989) proposes program planning involves concepts such as bargaining (negotiating interests), anticipating and counteracting (power and emancipation), and organizing and democratization (explication of values). He continues that planners need to understand how the relationships of power shape the planning process to improve the quality of their analyses to empower citizen and community action. Information, as Forester advocates, is used as a source of power. The use of this power may lead to a critical approach to hegemony that is the proactive attitude toward improving inequalities that deny some while serving the interest of another as opposed to simply assuring equal access. Cervero and Wilson (1994) build on Forester's viewpoint, focusing on how planners should plan responsibly by learning to understand situations in terms of power and interests relations.

What really matters in program planning is that program planners must responsibly learn to negotiate power and interests through program planning tasks embedded in social environments (Cervero and Wilson, 1994, 1996; Forester, 1989). The central form of action that planners undertake in programming is negotiation of power and interests. Planning is likely to be a cooperative effort between multiple planners with multiple power and interests. Negotiation of power and interests is conducted within the program planning tasks of assessing needs, determining objectives, selecting content or methods, developing action plans, managing programs, and evaluating programs (Caffarella, 1994; Cervero & Wilson, 1994; Sork & Caffarella, 1989). These technical program planning

tasks guide planners on what to do and they are the activities within which planners negotiate power and interests. Cervero and Wilson (1994) suggest that “significance lies not in their technical execution but in the political and ethical consequences of whose interests come to the foreground of planning and whose interests are downplayed” (p. 91).

Planners should learn how to look for sources of support and potential obstacles and determine power relationships “by figuring out who counts and who should count” (Cervero & Wilson, 1996, p. 99). This categorizes the critical theory as a social and political activity that determines how to meet the interests of a planning community along with those of the planner, the learner and the public. Cervero and Wilson build on Forester’s (1989) concept of bounded theory that suggests that planners need to consider the way the social relations of power and interests are built or structured in a community to make responsible planning decisions.

Bonded Rationality

Bonded rationality suggests that planning practice is organizationally embedded and constrained or bound by the given setting or context influenced by relationships of power and interests (Cervero & Wilson, 1994; Forester, 1989; Mills, Cervero, Langone, & Wilson, 1995). To plan responsibly, the program planner needs to assess the environmental contexts in which they work and act according to the structure of the power and interests within that environment (Forester, 1989). The bondedness of a planning context is assessed by determining the number of planners, understanding the plan setting, knowing the definition of the problem, perceiving the manipulation of information, and discerning the time available to the planning community. By

understanding the bondedness of a planning situation, the structures of power and interests relationships, a planner will also have a rationale for the central form of action within planning programs. This central action is conducting negotiations of power and interests.

Relationships of power and associated interests are described as unbounded and bounded rationality (Cervero & Wilson, 1994; Forester, 1989). These conceptual schemes are the basis for analyzing how power and interests relationships in the planning community influence program planning in the cases presented in this study. Unbounded rationality is described as nonnegotiable. One planner has all the information, time, and resources needed to make decisions. Problems are solved through algorithms and solution techniques. In bounded rationality, negotiations are necessary within varying power and interests relationships of the planning community.

Bounded rationality is described as four levels; I, II, III, and IV (Forester, 1989). In the first level, termed individual limits, one planner works in a world of limited resources and time and imperfect information. Negotiations are conducted within the planner's own interests. The most appropriate planning strategy to use in level I is satisfice, meaning to use satisfactory alternatives rather than optimal ones, settling for less than perfection. The term network describes level II. The planning community is populated by other planners and decision makers who have a cooperative working relationship. What looks different in level II is the setting, information and time resources. The setting is socially differentiated as there is a division of labor between the planners. The planners are in contact with each other by phone, E-mail, or faxes but the information varies in quality and is less than simply being available as in level I. Time becomes a

precious social resource limited by different planners in the community. Program planning strategies need to expand on just being satisficing now to include networking skills. Networking includes forming and maintaining relationships among people with similar interests who need to be brought together to construct a program. Planning in the next two levels becomes more complex.

In level III, called pluralist conflict, not only do planners have competing interests, the definitions of problems are multiple. Planners use asymmetrical relationships of power to further those interests. That power plays a weak role as it is diffused so widely in the planning community that all important interests have a voice in planning. Information becomes a political resource to be contested, withheld, manipulated, and distorted. The process is described as different planners using time, resources, and information to further their own interests in planning programs. Gaining access to information gives way to whom to trust, and what can be done to ensure that all interests have an equal role in planning programs. In order successfully to plan programs in level III, the strategy to employ is the art of bargaining or negotiation among the interests.

Bonded rationality IV, structural legitimation, is concerned with a highly structured political community often positioned with and against one another. The differing interests appear among the vast portions of the population as in race, gender, ownership, or wealth. This level addresses the power and interests relationships of the “have and have-nots” (Forester, 1989, p. 60). The problems in planning are reflected in social sources. Time is power, not distributed equally. The “haves” have more time than the “have-nots” who are concerned with immediate survival issues. The acquisition of

information to make decisions blurs into self-serving misinformation. Strategies needed for level IV are to be able to work toward effective equality and democratic participation and move away from racial, sexual, or economic domination. Planners need to know more than the technical knowledge of planning. They need to be sensitive to the political environment and be able to work with others, develop trust, locate support and opposition, be sensitive to timing and know the informal ropes of an organization.

Realizing the power and interests structure of a program provides the setting for the central form of program planning, negotiation. Bonded rationality, as used by critical planners, shows that planners negotiate with their own interests and other's interests, and also between interests and about interests of the planning community. Agreeing with Forester (1989), Cervero and Wilson (1994) acknowledge that planning situations do not fit neatly into one of these rationalities. Real planning situations often exhibit multiple conditions and call for a combination or blend of strategies. This might be described as the art of program planning.

Power Relationships

Critical theory power relationships are characterized by a "Habermasian account of hegemony" (Forester, 1989, p. 224). Hegemony power relations are understood, in the critical theory sense, not as one planner wielding interests upon another, but as a planner building relationships that bind the planning community together. This relationship structures a planner's dependency upon the other's information, recognizes the supposed authority of the other, and trusts the other's ideas and actions. Power is the planner's

capacity to act, given to planners by virtue of the social planning environment in which they plan (Apple, 1992; Cervero & Wilson, 1994; Isaac, 1987).

As power is exercised through negotiations, it is placed at the center of planners' actions (Cervero & Wilson, 1994; Giddens, 1979; Isaac, 1987). Planning is conducted in a planning community of power relations, some constraining and some enabling, which structure how a planner must act (Cervero & Wilson, 1994). Forester (1989) adds to the view on power relationships by stating,

If planners ignore those in power, they assure their own powerlessness. Alternatively, if planners understand how relations of power shape the planning process, they can improve the quality of their analyses and empower citizen and community action . . . Whether or not power corrupts, the lack of power surely frustrates. (p. 27)

Forester continues that the main source of planners' power lies in their ability to control information and misinformation.

Understanding the key sources of a planner's power in the control of information helps provide a framework for analyzing how power relationships influence program planning. Power in information is represented by labels such as technician, incrementalist, liberal-advocate, structuralist, and progressive (Forester, 1989). The technician avoids politics and simply supplies information. The incrementalist responds to organizational needs. Knowledge is supplied through social networks, steady contacts, and communication to keep planners informed. The liberal-advocate shares information to under represented or unorganized groups to enable them to participate in the planning process. The liberal-advocate focuses on information for a particular group such as the poor or the powerless. In the structuralist approach, information serves to legitimize

existing structures of power and ownership and to bring public attention to issues. The power exerted is to keep people in their place and protect existing power. The last approach to information as power is progressive. Information is used to enable participation of citizens, call attention to political barriers, recognize misinformation and organize information to counteract misinformation. Planners seeking an understanding of the approaches of control of power through information can anticipate the efforts of interests that either support or threaten the program planning process. The actual relationship of power and the exercise of power are about the program communities' real and expressed interests.

Interests

Interests direct the actions of planners. As defined by Morgan (1986), interests are “predispositions embracing goals, values, desires, expectations, and other orientations and inclinations that lead a person to act in one direction or another” (p. 41). When planners must decide what to do or say, interests are the motivations and rationales that lead people to act in certain ways (Cervero & Wilson, 1994). Interests are the human social purposes that give direction for acting in the world (Carr & Kemmis, 1986; Habermas, 1971). However, interests do not determine relationships of power; they operate within the exercise of power.

Cervero and Wilson (1994) suggest that planners exercise power within and between their own and other's interests. The planning process is influenced by how the planner recognizes those interests. Interests are conceptualized into three categories as expressed, ideal, and real interests (Balbus, 1971; Connolly, 1972; Isaac, 1987).

Expressed interests are revealed preferences. A program is determined by power relationships and by what programs the planning community indicates it wants. Planners can assess expressed interests by asking people what they want to do. An ideal interest is linked to people's ethical beliefs about what should be done to promote just social conditions. Cervero and Wilson (1994) propose that critical viewpoints of program planning should incorporate ideal interests in the analysis of power relations, as planning is a social activity. Real interests are bound by rules and expectations that say how planners are supposed to act while conducting program planning activities. The real interests are not as easily identified and are manifested as habits rather than through conscious effort. As Dewey (1927) explained,

Habits bind us to orderly and established ways of action because they generate ease, skill, and interest in things to which we have grown used and because they instigate fear to walk in different ways . . . Habit . . . determined the channels within which it operates. (p. 159)

Interests of the planning community are centrally involved in planners exercising power. Critical theory program planning proposes that programs are influenced by the power and interests of the planning community and the way in which the process is conducted through negotiations. Responsible planning depends upon the knowledge and skill of the planner to negotiate powers and interests of the planning community.

Negotiations

Negotiations are crucial to making program planning decisions regarding power and interests of the planning community. As defined in the critical theory, negotiation is a social and political strategy conducted within the program planning tasks that addresses

the specific relations of power and interests in the planning community (Cervero & Wilson; 1994; Forester, 1989). The authors continue the assumption that planners negotiate with specific power and interests representing the planner's interests and those of the planning community. Even if a conflict is not apparent, planners negotiate between and about the interests of the community. Some strategies are focused on the informal negotiations that may produce results even before formal decision making begins. To be responsible negotiators of power and interests, the bounded rationality theory introduced earlier in this chapter provides a framework for planners to recognize various planning situations where power and interests vary and to negotiate with those differences in mind. Characteristics of negotiation involve simultaneously negotiating with, between, and about power and interests relationships. (Cervero & Wilson, 1994).

Negotiation occurs as planners negotiate with power and interests to plan programs. Planners negotiate between the interests of other people, bring their own interests to the planning process (negotiate with), but also deal with the interests of other planners (negotiate between) (Cervero & Wilson, 1994; Forester, 1989). The other act of negotiation occurs as planners negotiate about the interests and power relationships themselves. Power relationships are constantly changing because of the negotiation practices, thus resulting in new power relationships to renegotiate. The question remains how planners can be effective negotiators. This is accomplished through understanding how to formulate a program plan considering negotiation of power and interests.

Planners need three areas of knowledge and skill to be successful, responsible negotiators of program practice (Forester, 1989; Habermas, 1971). The first is a technical

knowledge and skill about how to construct programs effectively. This area includes such skills as designing surveys, organizing goals, managing programs, writing budgets, and marketing programs. Political knowledge and skill are also needed to work with the people in the planning community and accomplish objectives. This involves forming networks, developing trust and respect, understanding power structures of the organization and knowing which strategies will and will not work in the planning community. The last area entails having an ethical knowledge focusing on nurturing a substantively democratic planning process in the face of a power structure that threatens or supports democratic sociopolitical relationships. To accomplish the task of negotiating in a responsible manner, planners must be aware of their own interests and aware that risks can and must be taken to represent all relevant interests in the planning process.

Forester (1989) suggests that planners use negotiation strategies to press professionally and to negotiate for particular goals. He also encourages a participative process that gives voice to interests represented in the planning community. Other literature also offers different strategies for negotiation. Basic steps suggest getting to know each other through meetings, having specific written or expressed goals and objectives, beginning confrontation or negotiation, expressing conflict face-to-face in negotiation meetings, reassessing what is important to win, and agreeing on solutions in writing (Brooks & Odiome, 1984; Forester, 1989; Patterson, 1996). As suggested by Forester (1989), program planners can use negotiation strategies to address “power imbalances of access, information, class, and expertise” (p. 103) which jeopardize the quality of the planning process. Negotiation strategies are conducted in and are

contingent upon the power and interests of the planning community. Theorists have offered several ways in which to understand communities.

Understanding Community Environment

Program planning is a social activity conducted within the context of an organization or community (Cervero & Wilson, 1994, 1996; Forester, 1989). Planners need to understand the structure of a planning community to be able to negotiate power and interests responsibly. A definition of community that provides a framework for understanding those negotiations in program planning is offered by Galbraith (1990). He states that “a community may be defined as the combination and interrelationship of geographic, locational, and non-locational units, systems, and characteristics that provides relevance and growth to individuals, groups, and organizations” (p. 5).

Community Concepts

A historical perspective and insight for understanding community is from the work of Tonnies (1887/1957), first published under the title *Gemeinschaft unt Gesellschaft* and translated by Loomis (1957) as *Community and Society* (Galbraith, 1990, 1992; Lutz & Merz, 1992). According to Loomis (1957) the translation of *Gemeinschaft* community is described as a living organism. A *Gemeinschaft* community is folk-like and is characteristic of families, neighborhoods, and friendship groups that relate to each other in a sense of mutuality, stability, common identity and concerns, and a common subscription to social norms, bonds, and obligations. Folk groups are further interpreted as “no more people within it than can know each other well” (p. 15). Loomis suggests a *Gesellschaft* community includes concepts such as society, public life, urban like, transitory, or

coexistence of people independent of each other. A *Gesellschaft* community is understood as a “multitude of natural and artificial individuals, the wills and spheres of whom are in many relations with and to one another, and remain nevertheless independent of one another and devoid of mutual familiar relationships” (Loomis, 1957, p. 76).

Tonnies’ (1887/1957) work was written during the industrial revolution when people were moving from an agrarian society to an industrial society. Tonnies was concerned about the change in social interaction and the human conditions accompanying people leaving small communities and extended families and moving to large cities where they had no traditional support systems. Adding to Tonnies’ concept of understanding community were the works of Bender (1978) and Lutz and Merz (1992). Bender builds on Tonnies’ perspective of community by his description of *Gemeinschaft* and *Gesellschaft* as two patterns of social relationships that coexisted. He suggests that the study of community must focus on tension and interaction within the larger context of a complex society in which there are “multiple loyalties” (Bender, 1978, p. 59). Lutz and Merz (1992) suggest that there exist two generalized types of community social relationships. The first, *Gemeinschaft*, supports bonding together of people with other people, roles with other roles, and lives with other lives. In the second, *Gesellschaft*, people are separated from other people through independent roles and conflicting values. Understanding the patterns of interests and power in communities is important in making responsible program planning decisions. Descriptions of communities have been expanded beyond *Gemeinschaft* and *Gesellschaft* to incorporate geographical and relational characteristics.

Community Descriptions

The world in which we live in is a mega-community encompassing international, national and local connections of cultural, social, psychological, economic, political, environmental, and technological elements (Galbraith, 1990). A community can be depicted by its vertical and horizontal patterns. The vertical representation of a community is represented by the community and its social relations oriented to international and national society and culture (Warren, 1978). The horizontal pattern represents relationships of local units through which the social system does local and relevant functions, provides education, employment, and income, and establishes a link between various social units and individuals in the community (Galbraith, 1990).

Warren (1978) defines a geographic community as that “combination of social units and systems which perform the major social functions having locality relevance” (p. 9). In this type of community people have local access to a diversity of activities that are necessary in day-to-day living (Galbraith, 1992). Other definitions are concerned with the common interests, concerns, and functions of people. Communities of interests and communities of functions may supersede geographic boundaries (Brookfield, 1983). Galbraith (1992) suggests that geographic communities, communities of interest, and communities of function intersect and overlap into the broad conceptualization of community.

Communities of interest are groups of individuals bound by some single common interest or set of common interests such as leisure activities, civic and special political interests, or spiritual and religious beliefs and affiliations (Galbraith, 1990, 1992). Wright

(1980) states that “a community is a collectivity of people differentiated from the total population by a common interest” (p. 101). “Communities of function are linked by major life roles such as teacher, attorney, doctor, farmer, student, homemaker, parent, and so forth” (Galbraith, 1992, p. 9). Demographic communities are groups bound by common demographic characteristics such as race, age, and sex. Psychographic communities are formed by a commonality of value systems, social class, and lifestyle, such as “the yuppie community” or “the gay community” (p. 10).

The good community is concerned with “primary group relationships, autonomy, viability, power distribution, participation, degree of commitment, degree of heterogeneity, and the extent of conflict” (Galbraith, 1992, p. 10). Warren (1978) suggests that the good community be people-oriented and democratic in nature. The good community is concerned with the capacity of people to confront their problems through concerted action, directing themselves to the distribution of power, arranging for participation and commitment in activities, understanding how differences among people can be tolerated, and debating how much control and conflict should be in decision making. Another view of a good community, as offered by Newmann and Oliver (1972), is a group in which membership is valued as an end, members share a commitment to stability, subscribe to a set of common social norms, maintain a sense of shared identity, and have extensive personal contact with each other. Also, the community concerns itself with aspects of the members’ lives, tolerates competing factions, and has procedures for handling conflict.

Warren (1978) offers four approaches to study a community using geographical location, population description, institutional values, and people interactions. The geographical method describes communities as to location such as rural or urban. Population descriptions define the kinds of persons who live in communities by looking at age groups, racial and nationality groups, sex, mobility, and the rates of change over time. Determining a community's institutional values depends on looking at ways in which a community makes accessible the various institutional facilities for daily living needs. The last approach studies the manner in which the community interacts and associates with the family, religious organizations, government, and educational settings.

Summary

A review of the classical, naturalistic, and critical viewpoints reveal a consensus of the importance of including program tasks in everyday planning. These processes include determining a problem or need, setting objectives and goals, selecting learning activity method and content, developing action plans, managing the program, and conducting evaluations. These tasks are described in the classical or technical program planning language. The naturalist viewpoint suggests that program planning is one in which planners use many planning components at the same time depending upon the situation.

To plan responsibly, several planning dimensions are incorporated into the critical theory model. These dimensions include negotiating power and interests through planning tasks, anticipating sources of support and potential obstacles, determining power relationships, and knowing who planners are responsible to (Cervero & Wilson, 1994, 1996; Forester, 1989). The critical viewpoint also proposes that power is the planner's

capacity to act, given to planners by virtue of the social planning environment. A main source of power is the control of information. Planners' power is exercised within and between their own and others' interests as influenced by the interests of the planning community.

Interests expressed as goals, values, desires and expectations direct the actions of the planners (Cervero & Wilson, 1994; Forester, 1989). Critical theorists suggest that program planning should incorporate ideal interests linked to a person's ethical beliefs in promoting just social conditions. The main action of planning to decide who has power and determining whose interests are represented is conducted through negotiations. Negotiations are a social and political strategy conducted within the program planning tasks that address the relations of power and interests. Negotiations are conducted with, between, and about power and interests relationships. The planning of programs incorporates considering power and interests relationships while the action of planning is practiced. Planners should formulate a theory-in-action that guides planning strategies that should be taken.

The theory-in-action that planners write down and talk about is the espoused theory. Theory-in-use is what is followed in practice. The critical viewpoint offers that by studying daily planning interaction, inconsistencies that exist between the two theories can be explained and planning practices improved.

Since program planning is a social activity concerned with negotiating power and interests relationships of the planning community, learning how to plan within varying structures of power and interests is important for planners. One way to consider the

environmental context in which planning and negotiations takes place is to consider how the community is bonded. Bonded rationality helps planners to classify what type of strategies or negotiation to use as related to relationships of power and interests structures of a planning environment (Cervero and Wilson, 1994; Forester, 1989). Power is concerned with how social behavior is influenced by individuals or by formal or informal organizations in the community (Galbraith, 1990, 1992; Warren, 1978). A planning community can also be described as geographical and social relational characteristics such as interest, function, and values. The structure of a community influences how power and interests are negotiated.

The purpose of this study was to understand the program planning process used to develop technology programs as influenced by negotiating power and interests within the planning environment. The critical perspective provides a window in which to view how the program process was conducted, the influence of the planning community and how power and interests were negotiated. This study used a multiple case study as a method to provide an understanding of how the program planning process was conducted. The next chapter presents an overview of the methodology of this research.

CHAPTER 3

METHODOLOGY

The case study method is the “preferred strategy when *how* or *why* questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon with some real-life context” (Yin, 1994, p. 1). This study fit those specifications, as participants were those involved in the program planning process for developing technology programs. The investigator had little control over how the process worked at a particular site. Finally, the study of the program planning process for the development of technology programs is a contemporary, real-life topic that is a challenge to the nation, businesses, community members, and educators.

Research Design

The methods used in this study were interviews, observations, and document review. The use of multiple sources of evidence to develop a converging line of inquiry enhanced the validity of the study by allowing the data to follow a collaboratory mode (Yin, 1994). This case study was designed to use triangulation, a combination of techniques, rather than a single technique, to collect research. Triangulation increased the confidence in research findings through corroboration, elaboration, or illumination of the research in question (Denzin, 1988; Rossman & Wilson, 1985). Patton (1990) contends

that triangulation is the recognition that the evaluator needs to be open to more than one way of looking at a program.

Triangulation in this study was accomplished through using multiple methods and sampling. The methods used were interviews, observations, and document review. Multiple sampling strategies included interviewing people in different status positions with different points of perspective such as administrators, classroom teachers, resource teachers, and parents. The databases of interviews, observations, and document analysis were checked against each other to corroborate and augment evidence from other sources and to draw inferences for further questions and leads (Bogdan & Biklen; 1992; Denzin, 1978; Merriam, 1988).

Researcher's Role

Given that in qualitative research, the researcher is the primary instrument for gathering and analyzing data (Locke, Spirduso, & Silverman, 1993; Merriam, 1988) and due to the interpretive nature of qualitative research, the identification of the researcher's personal biases and assumptions help establish trustworthiness for the study and assist readers' interpretation of this work.

Interest in understanding the process of planning for technology was stimulated by the researcher's extensive program planning experiences in the field of library and media sciences, through graduate school class projects, and as a consultant with the Consortium. The researcher played an integral part as a planner and leader of committees that wrote grants, developed comprehensive plans to implement computer network systems, and integrated technology into classrooms. Biases and assumptions noted prior to

this study included a perception that the success of the program planning process depends on a commitment of the committee members, the planners' expertise in both technical and curriculum issues, money available to purchase equipment, installation and repair of equipment, and support of the school administration. The researcher perceived that communication was an important issue in the planning process. Communication lines should be open to district offices, businesses who supply and install equipment, students, parents, and to the staff. All who are impacted by the addition of technology into the classroom should be aware of and have an opportunity to participate in the planning process.

Methods used to strive for objectivity in this study included review of the findings by participants and by other professionals such as a dissertation committee and research cohorts. Experiences in planning and studying the process for developing technology programs enhanced the researcher's understanding of the issues that the informants described. The researcher had a sense of where to begin in the selection of key informants, such as technology committee members, administrators, and media specialists. The language of the collected documents was familiar to the researcher and critical information was apparent. Also, the researcher had a sense of what places to observe and what types of activities related to the program planning process. Experiences in program planning helped the researcher focus on information relevant to the study.

Research Sampling

The three cases studied in this research were the Consortium and two schools that were members of the Consortium, Banyon School and Central Palm School. As

mentioned in the definitions in Chapter 1, pseudonyms are used throughout this study to provide anonymity to all schools, participants and organizations. The potential population for this study was approximately 900 administrators, teachers and educational community partners linked by the Consortium. The Consortium was initiated in August of 1994 as a project of the South Center for Educational Leaders (Center). The Center is a self-governed, member-driven organization. Professional programs for leadership development and instructional improvement are provided by the Center to administrators and teachers in 725 public, private, and parochial schools in five Southern United States counties. The mission of the Consortium is “to build a strategic network of personal, professional and technological services for the ongoing, accessible support of schools who have made the commitment to transforming into world-class teaching/learning communities” (Cohn, 1996, p. 4).

The geographical region of the Consortium comprised a total of 80,544 square miles in five Southern coastal counties. The boundary from the southernmost city to the northern area of the Consortium district was 250 miles. Student diversity was great within the five counties. Three of the counties were among the 18 largest school districts in the nation. The student population for the five districts during the 1994-95 school year in grades K-12 was 682,926. Eleven percent of the students were limited in their English proficiency and 38 percent of the total population come from families living near or below the poverty level (Cohn, 1996).

Twenty schools were members of the Consortium in the first year of operation, 1996-1997. Public schools included 13 elementary, three middle, one high school, and one pre-k through eighth grade configuration. Two private elementary through high schools also participated in the Consortium. Though Consortium membership was open to five counties, schools were dispersed throughout four counties. The southernmost district had one school, the next northern six schools, the middle county twelve schools and the northernmost district one school. In addition to the Consortium, two member schools were selected for this study.

One of the Consortium school members selected, Banyon, was in a southeastern coastal urban upper-middle class community in the northernmost school district of the Consortium. The school was in a business and recreational area of town on a major thoroughfare. Banyon served students in the sixth through ninth grades with a student population of 1,480. Fifty-two percent of the students were male, 48 percent female. Of those, 63 percent of the students were white, 20 percent black, and 13 percent Hispanic (Sun-Sentinel, 1996).

Central Palm, was in a southeastern coastal urban upper-middle class community. The school district of Central Palm was in the middle of the five served by the Consortium. The school was in a residential neighborhood bordered by a private hospital and a state university. Central Palm was a school serving students in sixth through ninth grades. The student population of 1,562 students was 51 percent male and 48 percent female. The enrollment was 79 percent white, 8 percent black, and 9 percent

Hispanic students (Sun-Sentinel, 1996). Further descriptions of the two school sites are presented in Table 1.

The school sites were very similar in demographic variables. Differences included Banyon having a higher number of students that spoke English as a second language. Also, Central Palm had a higher rate of instructional and other staff turnover.

Table 1

Demographics of Central Palm and Banyon Schools

	Central Palm	Banyon
Setting	Urban	Urban
Student population	1,562	1,480
Average class size	26	25
Spending per student (regular program)	3,243	3,531
Spending per student (exceptional program)	8,570	9,393
Grade 8 reading above national median	72%	68%
English as a second language students	2%	10%
Mobility rate	20%	25%
Instructional and other staff turnover	21%	14%
Staff 10+ years experience	56%	57%

Source: Sun-Sentinel (1996)

Site Consideration

The Consortium was selected for several reasons. They were a new organization interested in researching the program planning process to link their learning community with a telecommunications network. Also, the Consortium was chosen because the member schools were actively engaged in the program planning process for developing

technology programs in which active program planning processes could be studied. Another reason this was an ideal setting for study was that the mission and goals of the Consortium supported understanding and setting up a program planning process to develop technology services (see Appendix A). Finally, one of the goals for the organization was to have baseline research as would be provided by this study (Anthony, 1994).

Sampling Strategy

The approach to sampling taken in this study was a combination of typical case and theory-based or operational construct sampling strategies (Patton, 1990). Typical case sampling was conducted by selecting sites with the cooperation of key informants such as program staff or knowledgeable participants, who identified what was typical. Cases were also selected based on the strong presence or representation of the theoretical constructs and phenomenon of interest. This combination of purposeful sampling strategies was aimed at selecting information-rich cases that were typical of everyday program planning practice to plan technology programs. Typical program planning practice was characterized by the presence of a planning community working on specific objectives to improve the technology program. This section focuses on the strategies of sampling or how the cases and participants were selected. Further details on hours spent in interviewing, observing and number of documents collected are presented in the second section, data collection.

Participant Selection

One commitment of the Consortium was to connect with partner schools for on-site visits, sharing and other linkages. With that commitment in mind, selection of Consortium school partner sites, Banyon and Central Palm School, were made. The school cases were selected by several criteria. The first criteria used for choosing the school sites was the schools' expressed desire, as mentioned in the Consortium's information booklet, to be a resource for and to improve technology. Based observations made at schools, an active program planning process for technology was evident involving the community as partners in the process. The school sites were also selected based on their commitment to become partner schools, to seek an educational network. The settings were both community schools and served similar middle school populations. Lastly, a criterion was the schools' willingness to cooperate in the study.

The criterion for selecting participants to be interviewed was to select information-rich informants who had participated in or who had a knowledge of the program planning process for technology development. Initially the administrators suggested persons to interview. From those initial interviews, the snowball or chain sampling method was used where informants recommended other key persons to interview (Bogdan & Biklen, 1992). Those 13 persons interviewed were the Consortium director, a parent and community partner, four school administrators, two resource teachers on special assignment, two instructional technology teachers, and two media specialists (see Table 2). Guided interviews were used in this research as a face-to-face encounter with the research

Table 2

Demographics and Functions of Program Planners

Name	Sex	Years at This Site	Current Position	Role in Planning
<u>South Consortium</u>				
Gloria	F	7	Executive Director, Consortium	Interest in establishing telecommunications network between five counties and 20 Consortium schools
<u>Banyon Community Middle School</u>				
Don	M	9	Principal	Responsible for overall vision and direction
Betty	F	15	Resource Teacher of Teacher Professional Development	Assists in school-wide coordinating of committees
Chuck	M	3	Instructional Technology Teacher	Heads the technology committee
Paul	M	3	Assistant Principal, Community School	In charge of planning technology programs for the community school.
Angie	F	15	Media Specialist	Technology committee

(table continues)

Name	Sex	Years at This Site	Current Position	Role in Planning
<u>Central Palm Community Middle School</u>				
Shelly		4	Principal	Responsible for overall vision and direction
Jay	M	3	Parent and Computer Business Partner	Chair of technology committee
Cindy	F	21	Instructional Technology Teacher	Member of committee
Sally	F	10	Resource Teacher also Grant Writer Curriculum Council Chairperson	Member of committee and secretary
Ann	F	1	Media Specialist	Member of committee; also cataloged software
Pam	F	4	New Assistant Administrator	In charge of technology program at the school

Note. Banyon's technology planning committee was in the process of being officially organized. Central Palm's technology planning committee, PTECH, had been in operation three years. The Consortium was in the first year of full operation.

participant to gather descriptive data in the participant's own words so insights into how the participant interpreted the program planning process of technology development could be made.

Observation Selection

Site observations provided direct, first hand information about the program planning process that described the activities that took place, the people that participated in those activities, and the context within which program planning activities occurred. Both participative and nonparticipative observations were used to corroborate data gathered in the interviews and document review. Participant observation was conducted as the researcher entered the world of the people to study, got to know, was known, and trusted by them, and systematically kept a detailed written record of what was heard and observed (Bogdan & Biklen, 1992).

This type of observation combined "document analysis, interviewing, direct participation and observation, and introspection" (Denzin, 1978, p. 183). The criterion for selecting observation sites was to choose places and activities that directly related to the program planning process for technology development and to the overall program planning process for the Consortium. Participative observations were made in meetings, focus groups, institutes, technology training and planning meetings. Nonparticipative observations were made in media centers, teachers' lounges, front offices, school grounds, classrooms, and technology meetings.

Document Selection

The purpose of collecting documents was to explore how the program planning process was portrayed in the written words of the participants. As explained by Bogdan and Biklen (1992), documents represented data that the participants gave attention in compiling. Reviewing documents was helpful in verifying spellings mentioned in an interview, providing other specific details to corroborate and augment information from other sources, and drawing inferences that were a reference for further investigation. Documents were selected based on obtainability and relevance to the program planning process for technology development. Documents collected were classified into written reports, policy statements, formal studies of sites, communications, and mass media. Not all of the documents were significant in data collection. Documents included school improvement plans, school technology grants, school newsletters, the proposal for the Consortium, committee lists, professional development appraisals, media center newsletters, technology policy statements, bulletins, and brochures.

Data Collection

The potential sites for the case study were selected in August 1996. The research study was described to the administrators of the schools and director of the Consortium and they were asked if they would be willing to participate. The next step was securing approval from the university Institutional Review Board (see Appendix B). When permission was secured, the first participants identified were contacted to set up the first in-depth interview session.

Interviews

In-depth interviews were selected as the primary data collection source.

Interviews allowed informants to describe how they perceived and participated in the program planning process for technology development. The purpose of the interviews with the Consortium Director was to explore the overall Consortium's program planning process and provide an understanding of the influence and relationship of the Consortium on the planning process of members schools. Interview guides were prepared for the school staff, administrators, and Consortium Director with a list of issues used to probe and explore the program planning process (see Appendices C, D, and E). Interview guides were developed and piloted by the researcher before this study as a class project for an advanced qualitative inquiry course. The initial guides were revised based on data obtained from the class project and from initial observations at the sites. Interview guides consisted of open-ended questions and suggested probes. The probes were selected to maintain consistency between interviews and to keep the interviews focused on the research interests of this study (Patton, 1990).

The 13 initial interviews were one-hour to one and a-half-hours in length. Follow up interviews or contacts to gather additional information or to clarify prior interviews were from a half-hour to one hour in length. Total hours spent gathering information from each participant are represented in Table 3. The interview session began with introductions, questions, and the establishment of rapport between the researcher and the participant. An explanation was made of the study and of information on the consent form. The consent form assured participants their rights and confidentiality of individual

Table 3

Interviews Conducted

	Banyon Middle Hours Interviewed		Central Palm Hours Interviewed		Consortium Hours Interviewed
Principal	1.5	Principal	2.0	Director	4
Assistant Principal, Community School	1.5	Assistant Principal, Curriculum	1.5		
Resource Teacher	2.0	Resource Teacher	1.5		
Media Specialist	2.0	Media Specialist	1.5		
Instructional Technology Teacher	1.5	Instructional Technology Teacher	1.5		
Instructional Technology Teacher	1.5	Parent and Business Partner	2.0		4
Total Hours	10		10		4

Note. Hours include initial and follow-up interviews.

responses (see Appendix F). Each participant agreed to enter the study. Interviews were conducted in participants' offices, classrooms, conference rooms, and a restaurant. The interviews and data analysis began in September of 1996 and were completed by February 1997.

The interview sessions were audio taped with permission of the participants. In one session, by request, taping was stopped while personal information was shared. Field

notes were also taken during the interview session and were typed by the researcher after each interview. The field notes described the setting and other observations made during the interview. These observations included such records as the interviewee's verbal and nonverbal communication reactions, effectiveness of the interview guide, and other notations that would establish a context for interpreting and making sense of the interview data. The session ended with the researcher asking permission to recontact the participant if further clarification of the interview was needed and if additional interviews could be scheduled. Participants were told that they would receive a copy of the findings pertaining to the information that they had given in order for them to verify the context of the interpretation.

Observations

The observations conducted explored the setting, participants and social environment surrounding the participants (see Table 4). A total of 102 hours was spent in observations. Of those, 76 hours of participative observations were spent in meetings, focus groups, institutes, and technology training and planning meetings. Nonparticipative observations of 26 hours were spent in classrooms, front offices, media centers, teachers' lounges and in technology planning meetings. The site and activity observation guide (see Appendix G) included such items to look for as the physical setting of the computer labs, the key participants, the program activities, participant behaviors informal activities, and nonverbal communication. A contact guide (see Appendix H) was completed after each interview and observation that recorded comments and a summary on the activity.

Table 4

Observations Conducted at Each Site

	Banyon	Central Palm	Consortium
Participative Total:	0	7	69
Board Meetings			
Focus Groups			
Institutes			
Training Meetings			
Technology Planning			
Nonparticipative Total:	8	8	10
Technology Classrooms			
Front Offices			
Media Centers			
School Grounds			
Teachers' Lounge			
Training Meetings			
Technology Planning			

Note. Participative observations included 76 hours. Nonparticipative observations included 26 hours.

Documents

Documents pertaining to the program planning process were retrieved from the study sites (see Table 5). The number of documents collected were 185. Relevant to the study were 112 documents. Examples of documents collected included agendas, minutes of meetings, proposals, surveys, and E-mail. These documents were examined to confirm or disaffirm data collected during interviews and observations. Also, they provided additional information regarding program planning decisions, activities, and processes in planning technology programs. A summary form (see Appendix I) was completed on documents that were important to the study and attached to collected data. The form was

Table 5

Documents Obtained at Each Site

	Banyon Middle		Central Palm Middle		Consortium	
	Collected - Used		Collected - Used		Collected - Used	
Written Reports:	8	6	16	12	26	15
Meeting Agendas						
Minutes of Meetings						
Policy Statements:	14	8	12	9	18	11
Proposals, Progress Reports						
School Improvement Plans						
District Technology Plans						
Other Internal Reports						
Formal Studies of Sites:	3	3	5	5	10	10
Technology Survey						
Focus Groups						
Communication:	12	3	18	3	28	17
Letters, E-Mail, Faxes						
Memoranda						
Mass Media:	4	3	5	3	6	4
Newspaper, Newsletters						

Note. 185 Documents were collected. 112 Documents were relevant to the study.

used to help place the document in context, explain its significance, and give a brief summary. If a document was significant to a particular contact, the information from the summary form was included in the analyzed research data.

Data Analysis

Data analysis in this study could be described as inductive, generative, constructive, and subjective in nature (Goetz & LeCompte, 1984). Inductive analysis

consisted of scanning the data grounded in the context of the study for categories of phenomena and forming relationships among such categories, then modifying and refining them based on subsequent data (Bogdan & Biklen, 1992; Goetz & LeCompte, 1984; Merriam, 1988). Data were generated from the interviews, observations, and document reviews that were constructed into themes and categories. The researcher used subjective analysis drawing from own experiences, the data analyzed and the theoretical background that framed the study to interpret the data.

Three flows of simultaneous activity took place during data analysis: data reduction, data display, and conclusion drawing or verification (Miles & Huberman, 1994). The data collected from interviews, observations, and documents at the three sites were analyzed at first as separate cases. Cross-case analysis was later used to produce one case record.

The researcher began with analyzing interview, observation, and document data. Data were aggregated, organized, and classified into manageable themes categorically within a typology (Merriam & Simpson, 1995). The interview guide served as an analytical framework that represented the major properties and dimensions of program planning practice. It determined the general clusters for initially aggregating and organizing the data from interviews, observations, and documents. This method did not preclude the emergence of new themes and categories arising from the data. After an interview session had been recorded, the researcher typed a word-by-word transcript of the tape directly into a home computer word processor. Observation and document analysis, and field notes were also typed into a work processor. After the initial data were

analyzed, further memos were typed reflecting themes emerging from the data, comments on the study procedures, ethical dilemmas, attitudes about the study and points to clarify.

The computer program HyperRESEARCH was used to help manage and organize the data. The computer program was helpful in managing the massive amounts of information. The researcher was ultimately responsible for generating the categories and themes of the data and for analyzing the information. Descriptive data were sorted using a coding system, entered by the researcher, that physically separated material on a given topic. The initial 34 themes identified were reduced to four clusters of program planning process, program planning environment, factors influencing program planning process and negotiating techniques (see Appendix J). Those clusters were then renamed categories of planning community, program planning process, and negotiation of power and interests as reported in the findings.

Validity

Internal validity, the extent to which one's findings are congruent with reality, was addressed by triangulation of data and methods. The method of member checking contributed to the trustworthiness and credibility of the study (Lincoln & Guba, 1985). Participants were given a copy of the study findings and were asked to indicate if the information they provided was accurately represented and if any personal vulnerabilities were revealed. Suggestions returned included one correction of a document author. Also, a comment was received from an administrator, "Great representation - you did a great job capturing our school. I would love to send a copy to our new computer guy because it captures the frustration and hard work of the schools as they struggle with these issues."

Another method of validity was to use a tape recorder for accurate word-for-word interview transcripts.

Generalizability

External validity, the extent to which findings can be generalized to other situations, was addressed by the presentation of “thick data description providing enough information so that readers can determine how closely their situations match the research situation, and hence, whether findings can be transferred” (Merriam & Simpson, 1995, p. 103). Others who conduct research in similar educational parameters can determine from the rich data whether or not the case study described can be generalized to their setting. Another strategy used in this study to enhance generalizability was the use of triangulation of informants, and more than one data gathering method. Generalization of these findings was bound by the parameters of this research conducted in the context of a consortium of schools in a southeastern state. The two schools studied within the Consortium were community middle schools. The planning process analyzed was for developing technology programs within individual schools to support a telecollaborative effort with the Consortium.

Reliability

Reliability, the extent to which consistency is in one’s findings, was addressed by presenting assumptions and theory supporting this study. Also, an audit trail was established describing in detail the steps of the study to show that findings are consistent with the data collected and how the findings were derived from the data (Lincoln & Guba,

1985; Locke, Spirduso, & Silverman, 1993; Merriam & Simpson, 1995; Miles & Huberman, 1994; Yin, 1994).

Summary

The case study methodology was used to study the Consortium of Schools and two member schools actively involved in the process of planning for technology programs. Descriptive data on the practice of program planning were gathered from 13 interviews. To corroborate information, triangulation of data was accomplished through interviews, observations, and document analysis.

Data were analyzed by individual cases and then cross-analyzed to produce one case record. Themes emerged from the data collected from the interviews, observations, and documents that were categorized into three major groups. The findings from these three groups, planning communities, program planning process, and the negotiation of power and interests, are presented in the next three chapters.

CHAPTER 4

COMMUNITIES INFLUENCE PLANNING PROCESS

As mentioned in Chapter 2, program planning is a social activity conducted within the context of an organization or community (Cervero & Wilson, 1994, 1996; Forester, 1989). In this section, findings addressing the theme of power and interests within the planning community will be presented. Findings related to expressed interests are presented first. The second section of findings focuses on differing power structures. The last section presents findings on the power of leaders.

Interests Expressed

Interests are the expression of goals, values, desires and expectations that lead a person to act in one direction or another (Morgan, 1986). Interests that influenced the direction of program planning in this study were voiced by the community members, school districts, individuals, groups, and the nation. The interests expressed in the findings influenced what objectives were set and acted upon by the planning community.

Community Citizens Promote Interests

Community members of Central Palm and Banyon were a powerful force in determining the direction of the school planning process. A common interest of the community members was linked to a desire to participation in computer activities.

Central Palm's senior citizens showed an interest in wanting to learn more about computers. A technology teacher shared,

Seniors hear about the Internet and have gotten computers and want to communicate with people, be able to see what their health status is, to be able to read the newspapers, to be able to E-mail their friends. I mean it is unbelievable.

The technology chairperson at the same school added, "everywhere in my business and personal life I hear the words, 'Gee, I would like to learn how to use computers and the Internet.' "

Adult participants in the community school at Banyon were also an influencing factor in the program planning community. More computer training was being demanded in the evening classes. The community school administrator reflected this interest: "They need to know how to use a keyboard and type their name, their information and pretty soon we do banking and everything. I think it is going to be a necessity to be able to use a computer." The principal of the middle school corroborated, "When I came here we had one lab through the community school. We knew this was a direction we had to go, not only for our people in the community, but our kids needed to have that base."

National Interests Strong Influence

A powerful influence of the community surrounding the Consortium was that of the possibility of securing grants from national agencies to help promote the mission of the organization. As mentioned in the Consortium's proposal,

Coinciding with the development of a national consortium initiative, planning has been underway in the region to bring the Annenberg Challenge Grant to our area schools . . . Because the missions of the consortium so clearly correlate with goals

the Challenge holds for the region, it is believed that grants to the Consortium may be considered part of the matching funds for support.

A document collected that corroborated the national movement for communities to be on the cutting-edge of technology was the *Technology Literacy Challenge* issued in 1996 by President Clinton and Vice President Gore. This was a charge for “business and community leaders to join forces with educators to guarantee every student in America can use computers and the information superhighway to prepare for responsible citizenship and productive employment in the 21st Century.” This national challenge was echoed by an administrative assistant at Central Palm:

We want the kids to be prepared for the work world once they leave our school. We realize because of the time frame that kids must have access to and knowledge of technology to be able to function in our society today. And that is the bottom line -- the focus of our school in terms of technology.

Interests Supported by Planning Community

Strong personal interests made an impact on the planning process and the views of other planners. One interest expressed was to create partnerships to help educate children. The technology chairperson at Central Palm shared an example of this support:

School districts are faced today with a demand for more services with reduced budgets and the only way that we can get our schools going is with involvement of the community. Parent partnerships create stronger bonds . . . Parents are eager to get this [technology committee] going because they know it is going to benefit their kids.

This personal interest was supported by the media specialist at the same school:

“They are choosing what they feel will be the best for the school, what is best for the kids, because their kids come here too . . . that is a definite advantage.”

Another personal interest as expressed by the three cases was to receive “teacher training in technology.” The technology committees in turn supported the teachers’ interests and recognized that “more hands-on training opportunities” and “training” would need to be provided to the staff. A supporting statement was mentioned by a Central Palm technology committee member, “One thing that keeps coming back on surveys is that teachers don’t feel trained . . . that is always an issue so one of the things that the committee is proposing to do is to provide training to teachers.” These concerns for professional development were echoed in a Consortium grant proposal document: “When teachers are comfortable with their own growth as professionals through the help of technology, they will make it a natural part of their classroom instruction.”

Differing Power Structures

As suggested in the critical theory, planners exercise power within and between their own and other’s interests (Cervero & Wilson, 1994; Forester, 1989). Planning decisions are made based on which interests are recognized and acted upon by those in power, decision making positions. As observed, multiple planners with varying interests and powers were in each planning community of the study. Program planners of the Consortium included the director, board of directors, 20 member schools, five school districts, universities, parents, and business partners. The multiple planners at the school sites were district personnel, administrators, teachers, media specialists, parents, students, community partners, and universities. The following findings reflect the structure of multiple power and interests as related to diversity, time, and information.

Diversity Influences Planning Decisions

Among the factors affecting the sites studied were a tremendous increase in student numbers, student diversity, school construction, staff growth and mobility, and regional size and isolation. As reported in the Consortium proposal document, the area served by the Consortium:

Had nearly a 40% rise in school-aged residents . . . of diverse cultures, polyglot languages, divergent ethnic origins and varying socioeconomic backgrounds . . . During the 1994-95 school year student enrollment for the five districts totaled 682,926 . . . Many schools find themselves operating at as much as 200% capacity . . . More than 1,200 new teachers were hired . . . The regions comprise a total of 80,544 square miles . . . creating isolation.

Corroborating the diversity of the Consortium area were participants of focus groups who commented, "We had 26 different languages - difficulty with funds to meet their needs and continually juggling teachers." They also stated, "Students are getting pushed into larger classrooms." A private school teacher reported, "We have experienced tremendous growth - growing pains." The curriculum resource teacher at Central Palm commented on how staff changes affected planning: "It's very hard for me to say where they really are because our faculty has changed so drastically from last year in terms of reduction in size and people in different positions. So where people are and how they are utilizing what they have is very difficult for me to assess."

School Districts' Plans

School districts influenced school technology programs. As mentioned in a policy document, one large school district within the Consortium was developing a five-year plan. This plan was a major influence in this study. Twelve schools in this district were

participating in the Consortium, as was one school in this study, Central Palm. The plan proposed to set up a “comprehensive information technology plan to improve student learning as well as provide a technology infrastructure that can be accessed and used by all learners.” This plan addressed the “role and impact of information technology” and was to provide specific “implementation guidelines” such as devoting “at least 4% of the per pupil expenditure to technology,” Also included in the plan was “training, follow-up, and other support . . . to ensure effective delivery of instruction in the technology-based classroom.”

The plan mentioned, “at each school site a technology team must be formed to share the burden of supporting the software use, integration, and minor maintenance of hardware.” The district proposed to “develop support services to assist schools in producing high-quality, long-range technology plans.” A comment from Central Palm’s principal on the effects of this plan was,

It is going to be very organized and tie everything together. I don’t know when I am going to feel the impact of that, but it is there helping. Equipment will be coming.

The chairperson at Central Palm, however, mentioned that he was using the district’s new plan to “set performance measures at the school.”

Banyon’s school district also had influence on the planning process. Guidelines were provided for hardware and software purchases. A comment from the community school administrator was, “We have our guidelines set by the county.” The media specialist corroborated, “The county has a list of recommendations for software.”

Even though district plans were helpful, both school sites mentioned some frustrations about district purchasing guidelines. A member of the parent, teacher technology committee that will be further referred to in this study as PTECH said, “We look at the computers that the purchasing department of the school district has . . . and we find out without a doubt that a lot of items on that data base [suggested purchase list] are higher priced than you would find them elsewhere.” A technology committee member at Banyon added, “It doesn’t make any sense at all. I could go buy a cartridge in one of the store for \$7.99, but I have to go through an approved vendor and pay \$13.99. Why do they approve vendors who charge us more money?”

Participants were discouraged about the time that it takes to complete installations or receive equipment from the district office. The chairperson at Banyon commented, “The thing that is holding us up is the county. I guess they are just so backlogged in work orders that it will be months now just for them to come down here.” This was supported by a remark from the Central Palm chairperson, “The physical wiring was done last year, but we are waiting for the approval . . . in the sense that someone from downtown says it is okay to hookup and use.” Another comment from Banyon’s lead teacher referred to a new computer system the district was to install, “But, there again, time is, we’re always waiting. Our kids are up on the bleeding edge. We want to be on the cutting edge and those guys are two years back. That is a major frustration.”

Have Have More Time Than Have-Not

Participants mentioned time as a commodity that made a difference in the planning process. Time was expressed as being enough if planners were able to donate time to

volunteer to help with the planning process or to receive technology training. Banyon's technology chairperson shared, "If you have a problem with business, you go into a meeting and say we are not going to leave until it gets solved. Well we can't do that here." Frustrations were expressed when planners did not volunteer time to the committee or when delays in meeting objectives occurred.

The more time available to devote to the planning process the more the participants felt the objectives were met. Parents at Central Palm had the interest and time to volunteer to be on the planning committee. As one parent explained,

This goes beyond a partnership. I am adopting their school. Because if you don't do that, you are not going to be successful relying on a very highly centralized school district. You really have to buy into the school . . . not so much contribute dollars or used equipment, but contribute your time and expertise.

Several observations made of technology committee meetings at this site indicated monthly meetings being conducted and agendas specifying what objectives were to be accomplished and who was going to do them.

In contrast, at Banyon school site, community members and parents were invited to be a part of the planning community; however, as the lead teacher stated, "It is hard to get people because they are out in the business world and they are making money. They are being used as resources for their companies and they don't have the time to give."

Also, at the same site, the technology planning committee was having difficulty recruiting members. As stated by the technology chair,

It's a problem with getting people on board. Teachers are really strapped down with their time. We have classes and have children to take care of. Some schools have a computer instructor who only teaches a few classes a day. I teach five

classes a day. I run in and speak to someone in the halls between bells and say, listen, did the wires and cables come in?

Information is Power

The key source of a planner's power is in the ability to control information and misinformation (Forester, 1989). Information can be used by planners to provide equal opportunities and equal technical resources. The following findings provide examples of planners' statements on information as an influence on the planning process.

Break Isolation and Form Networks

A common thread of all the cases was to have information available to make responsible planning decisions. The Consortium director envisioned, "Setting up the technology, getting that up and running so that we have a Web site so that we can start connecting the schools." This plan was corroborated by comments from Consortium administration focus groups such as, "I like the networking so I could give someone a call and ask for assistance, so we can increase communication." Also, needs were shared to "break isolation, share common problems, and network." In one technology committee, results of ranking objectives for the planning process listed "communication [as] priority one of all planners." The chairperson of one school technology committee mentioned specific objectives to "get on-line as far as networking goes to have a system where each teacher is able to communicate with each other, each administrator to a teacher, each secretary to a teacher and access to parents." As observed in a training institute focus group, administrators of Consortium schools determined that schools should "share contact names and E-mail addresses for each school with areas of expertise."

Technology Expertise is Power

Central Palm's planning community relied heavily on parents who had a high level of technology expertise to manage the process and provide direction for decision making. As the technology chairperson stated, "I think PTECH would be a major contributing factor to ensuring tax dollars are used effectively and efficiently. I do not believe that there is enough, knowledge wise and experience, really to spend those dollars wisely when it comes to technology." An administrator was supportive of PTECH. As they stated, "Pretty much I empower them to do whatever it takes because I trust that they have the knowledge and I know that I do not have enough expertise nor do we have that expertise coming from any other direction."

Outside Information Sought

When technology expertise was not apparent in the local planning community outside knowledge sources were sought. According to one district school document, outside "consultants" were hired "to plan an integrated information technology system." This five year district plan was an "attempt to reform and restructure schools . . . and provide students with new skills necessary to compete in an information-based global economy."

The Consortium director as well as one school site was working with consultants, universities, and business partners to "develop a proposal for developing the technology component" and to "understand technology in terms of distance education." The formation of the Consortium was encouraged, as mentioned in the document, "by notables in the field" of educational reforms. This proposal was based on national literature

surveyed “to provide assistance to help the committee apply lessons from the histories . . . in the educational consortium movement.”

Lack of Information Creates Gaps

The administrative assistant overseeing the Central Palm’s school technology program stated, “Part of our focus as a school is to meet the needs of children as well as professionals within our system.” She continued,

We do have kids who do not have access, so we need to bridge the gap between what our kids have access to and what their knowledge base is. The same thing applies to our teachers. We have teachers who truly have a lot of information and some who have no information or very little.

A lack of information was mentioned about technology training at the district level and the type of training available to teachers in college media programs. Comments from participants at Central Palm were, “We have not had anything this past year. We don’t even have a lab set up to even do Internet training. It is frustrating.” Another comment from the same school corroborated the disappointments of training in her statements:

I do go to workshops that are offered in the county. Unfortunately, there are never enough workshops and never enough seats. Through all of my education courses in media, why is it that I had not heard of and distance learning courses? I learned basic, basic computer things that I had already known.

Power of Leaders: Who Is Doing the Counting?

The critical viewpoint of planning suggests that planners should determine power relationships “by figuring out who counts and who should count” (Cervero & Wilson, 1996, p. 99). The participants in this study were also concerned about who was doing that

counting, or leading the planning. Findings in the study presented different views of who was in a leadership power position.

Consortium: Personal Power

According to the Consortium proposal document, the role of the director was “crucial” as this was the only person in a leadership position that worked with the Consortium’s daily activities. Other persons observed in the Consortium organization were support staff. As mentioned in the proposal, the director was to have “credibility among colleagues that comes only from recognized know-how, personal respect and demonstrated success in the family of peers.” The director “would be a person of proven success in leading school teams of teachers, parents and community supporters in significant school improvement efforts.”

The Consortium director described her leadership role in an interview,

Our responsibility of the Center is a liaison between resources . . . we have absolutely, no clout whatsoever. However, what we do have is very strong personal power. As we talk to schools and get them connected, start them thinking about it [telecollaborative network]. I have no doubt in my mind that they will do everything they can to get connected. We are not in a line of authority position whatsoever.

This personal power was observed at institutes, technology meetings, and board of directors’ meetings where attendance was high, attention was given to the director, and participation was enthusiastic. During a focus group of teachers, a comment was made to encourage “personal school visits” by the director. The teacher continued that during these visits, “the topics were not as crucial as empowerment of teachers.” Another comment by a teacher was that Consortium “meetings like this change my mind; we are

considered professionals.” Through contacts with the director, it was learned that the number of Consortium school members was to increase from 20 to 42 in the second year of operation.

Banyon: Different Power Roles

Participants in Banyon’s planning community had different views of who was in power as the leader. The principal remarked, “Chuck is in charge of the overall computer technology.” Chuck described his role as, “I chair the technology committee, I participate in the IIT committee. We work together. Even though I chair it, I only give advice and give pros and cons to each committee to make a decision. The ultimate decision is by the principal.” Chuck described himself in an interview as a third year instructional technology teacher with a background in business. A school document that listed committees for 1996-1997 noted Chuck as a member of the technology committee but a different person as the chair. A comment from a committee member from Banyon was, “there are a lot of chiefs and everybody has their own vision of what they want”

The resource teacher at the school presented another view when talking about who was the leader of the technology program planning process.

That is tough at this school because we have such shared decision making. I know that the principal is quite a mastermind and I know that he has the total picture. A lot of us have bits and pieces here and there, although we do have all kinds of opportunities for input. People are always in the IIT committee, the technology committee, in night school and in our administration. It is like a tag team. The principal believes in teacher empowerment.

Central Palm: Strong Parent Leadership

In an interview, an administrator at Central Palm indicated who was considered the leader of the technology program planning process. The replied without hesitation was, "Jay. That is real apparent." He was a parent, computer business person, and chairperson of the committee. The administrator added, "PTECH is a grassroots organization to improve technology. The parent group has the vision."

Jay described the beginnings of his participation,

One of my girls, Jessica at the time, brought a note from school saying that the school was looking for parents that were interested in helping the school in technology oriented issues. So I attended the first meeting, got to meet several other parents and at the time, the principal there was Miss Jones and we kind of started this . . . parent organization at the time, very informal, we just met once a month. We started to work on school issues.

He continued, "you need to take ownership of the school . . . and get several other parents that are like minded and have the same interest to work with you on this . . . you really have to be committed." Jay further commented,

One of the issues we put on the table with the administration was the fact that in the past we had put a lot of time and effort into planning and developing plans of action. To find out . . . some of those decisions were reversed, not acted upon or eliminated. But based on discussions and agreements that we have had in this semester, I think we will be able to overcome those. We have asked for not only the responsibility, but the authority to direct the technology program at the school. And we feel that this is the only way we are going to be effective.

The principal encouraged parents' participation: "I believe that it is important to empower people, to know that they can really make a change with projects that they have become excited about and in doing it and they own a piece of the school - I think that is why they continue to show up."

Summary

The program planning communities were influenced by multiple power and interests relations when planning between, with, and among five school districts, a board of directors, school members, community members, parents, students, universities, and business partners. All cases were faced with similar interests of how to meet educational needs created by tremendous increase in student numbers, student diversity, school construction, staff growth and mobility. Also, participants were reacting to the nation's challenge to implement technology in all schools by focusing school improvement energies on planning technology programs. Differences in the cases studied included the number of planners, amount of time available to volunteer, information obtainable, and power structure of the leadership of the planning community.

CHAPTER 5

The ART OF PLANNING

The framework for analyzing the findings on the program planning process in this chapter is the critical perspective of program planning as defined in Chapter 1 and discussed in Chapter 2. This process is described as a process of many planners working on a variety of tasks at the same time and not necessarily in any specific order (Caffarella, 1994).

The program planning tasks as described by the participants and through observation and document analyses were coded using the following operational definitions. *Assessing needs* were defined as developing a program on identified needs through surveys, observations, interviews or group sessions. *Determining objectives* were clear statements of expected results to be obtained either on participant learning or program operations that had measurable components. Choosing what was to be learned during a learning activity and how that material was to be presented represented *selecting the content or method*. *Action plans* were short-range, specific strategies. *Managing the program* included purchasing, installation, funding, personnel, marketing, and scheduling. *Conducting evaluations* was a process to detect whether the goals and objectives of the program were met. A successful program does not necessarily depend on the presence of all of the tasks in all program planning situations. As suggested by Sork (1996), more

importantly than performing the task, the program planners should be aware of applying the “rules of thumb”(p. 83) and understand how power and interests of the planning community influence decisions. This chapter presents findings describing the program planning process. The first part offers models and analysis of how the planners said they were going to plan, espoused theory. The next section presents the actual program planning practices, theory-in-use. The last section presents participants’ descriptions of how the tasks of the process were managed. The Consortium portrays a macro model that represented an organization with 20 school members. Banyon and Central Palm were two member schools with technology planning processes working in cooperation within the Consortium.

What Planners Said They Were Going To Do: Espoused Theories

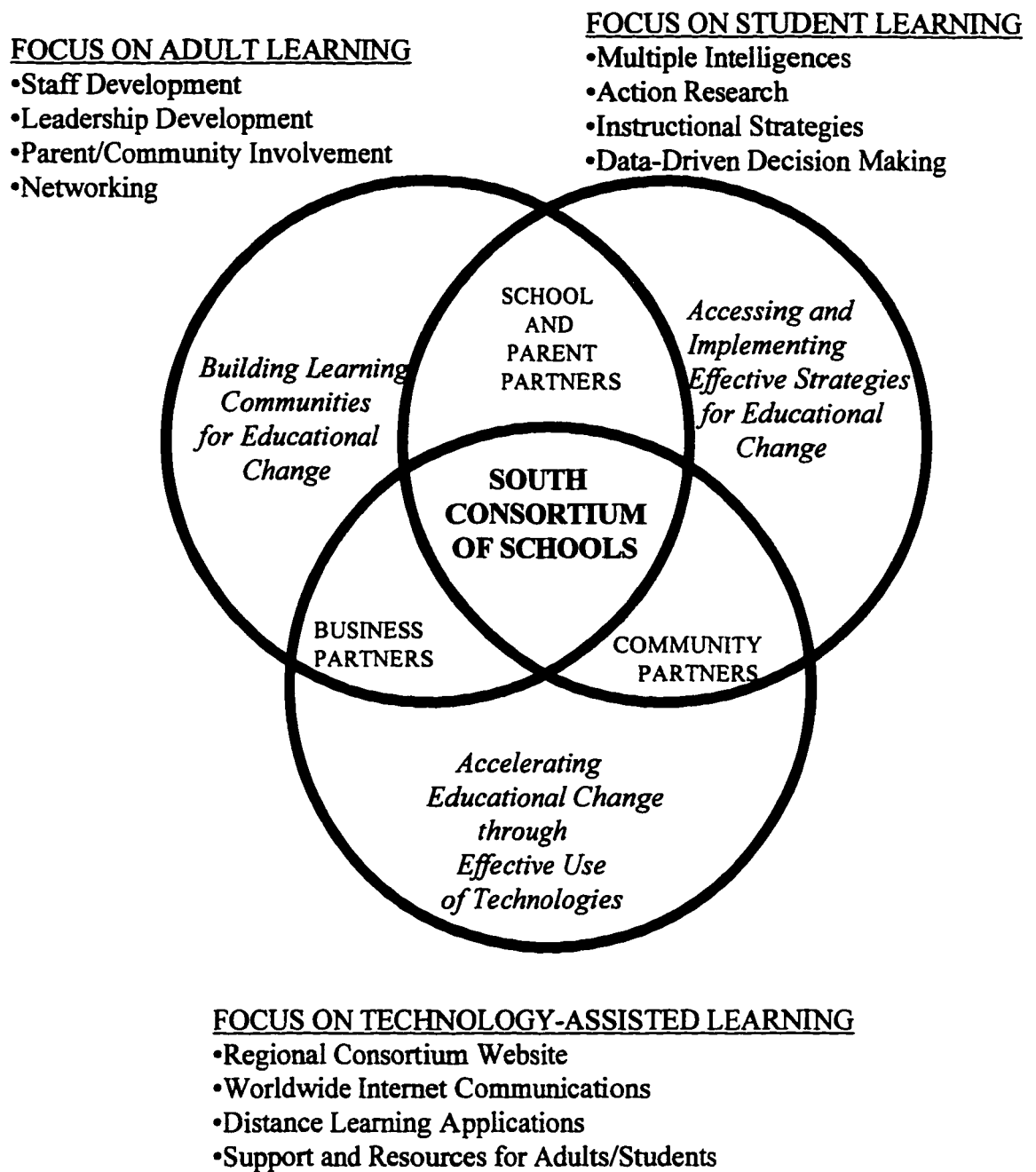
Planners in each planning community expressed what the planners wanted to do and how they wanted the planning process to look like. Participants in this study shared these planning models verbally or as written plans.

Consortium: A Clearinghouse

The Consortium was in the first year of operation. The program planning process, espoused theory, was designed at the inception of the organization in August 1994 (see Figure 1). In the Consortium proposal document, a five-year comprehensive planning method was established that included, “the need for a local Consortium, mission and goals, plan for launching, and plan for accomplishing goals.” The portion in the center of the model represented the Consortium organization as the “resource link to community,

Consortium's Espoused Model

Model for Achieving Systemic Improvement in Education



Source: Adapted from Cohn (1996)

Figure 1. Consortium's espoused model

business, school, and parent partners.” This link was provided as shown in the joined circles by “three areas of systemic improvement of education through building learning communities for educational change; accessing and implementing effective strategies for educational change; and accelerating educational change through effective use of technologies.”

In the proposal document, specific plans were written for accomplishing the three components of the model (see Appendix K). As observed, teachers in focus groups supported the Consortium’s depiction of the espoused planning process of being a clearinghouse by their descriptions of the Consortium as a “communication nexus” for creating “networking - an exchange of information.” Another description offered by teachers was, “a library card catalog acting as a clearinghouse for the books (schools), to bring all the resources together to get to the source (improved student achievement).” The Consortium was to be the liaison for decisions in the program planning process.

Banyon: Priorities Determined

An espoused theory of program planning was being developed by the recently appointed chairperson of the Banyon technology committee. (see Figure 2). This theory was in the development phase. The idea for the espoused theory as explained by the technology chairperson “was a result of a meeting. We sat down and wrote all the problems and categorized them. It came out to a number of different problems. Then we prioritized them.” Those needs were listed as “communication, teacher training, hardware-software issues, what do we buy, who buys it, do we document it, what labs do

Banyon's Espoused Model

Decision Making Power

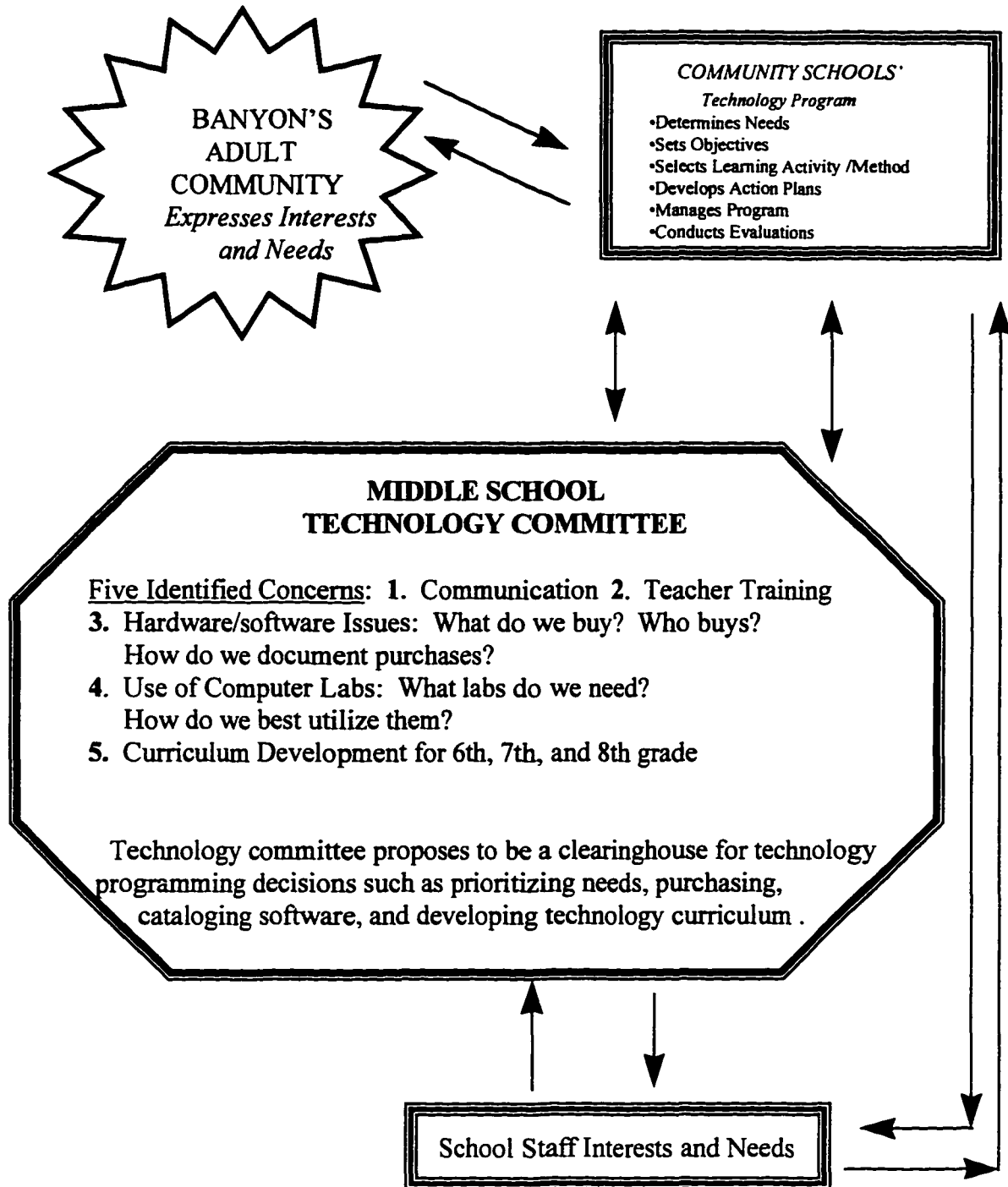


Figure 2. Banyon's espoused model

we need to be best utilized by the school, and technology curriculum.” This espoused theory suggested having a technology planning committee with “decision making power.” The chairperson continued, “The basis for the objectives was the school improvement plan and Blue Print 2000.” The community school program also had influence on the plan. As stated by the administrator of the community school,

Total school is always my first concern. The school is part of the community. When I purchase something as expensive as a computer, I want to be sure that the day school people can have equal access to it and in fact, if I need to add something to a computer that will benefit them, I’ll do that.

The technology committee program process was broken into five main priorities as mentioned on a planning document. Priority one was “communication of all planners.” “Concern for teacher training, marketing for teacher participants, and self-sufficiency of teachers” was priority two. Priority three addressed “concerns about hardware and software purchasing and repairs.” “Using computer labs” was the focus of priority four. “Curriculum development for sixth, seventh, and eighth grade” was the last priority.

Central Palm: The Orchestra

The chairperson of the technology committee at Central Palm summed up the espoused theory by comparing the program planning process with an orchestrated musical piece when he said, “We need to all sing from the same sheet of music”(see Figure 3). In the espoused theory, the principal had the original music score with all the parts, the overall vision. The PTECH committee was empowered to be the conductor, under the direction of the principal. The principal explained, “Jay is a very visionary person who I believe and have full confidence in and have empowered him to pretty much oversee

Central Palm's Espoused Model

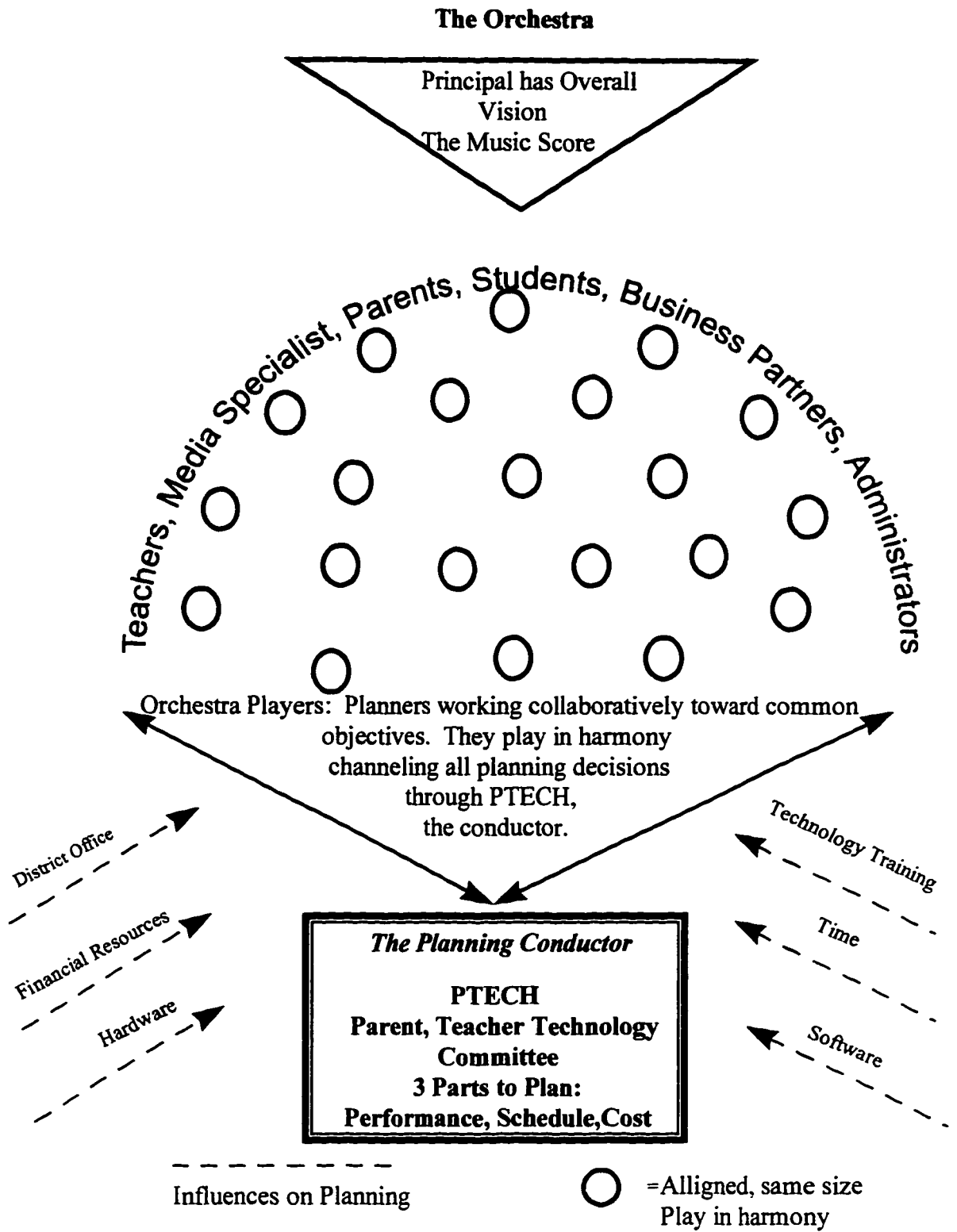


Figure 3. Central Palm's espoused model

to play in harmony when he stated, “We were requesting all decisions be run through PTECH.” He continued,

We have this blue sky, pie in the sky type of wish list of where we want to be five years from now . . . If we are successful in at least defining that model, then we think that we can have a reasonable sense of progress in reaching those objectives. We will have achievable performance measures attached to that model that we can measure our progress on . . . We are actually putting together the plan. The action plan for technology, a very comprehensive plan. Not only the technical equipment issues, but also people issues like training and financial.

During a phone conversation, Jay explained the components of the model:

The technology plan has three parts. The first will deal with performance issues in schools. The second is schedule and time-frame issues. The third is cost. We have already looked at where we were and where we want to be through the needs assessments. Now we are ready to move forward to put the infrastructure in place to put in the NT server and connect with the local area network. We are getting technical expertise through the PC Club. Scheduling is the second part. We have compared our plan with the district matrix. According to the district plan we would reach level five in three years. We decided that was unacceptable. We feel that we will reach level five by next year. It is doable. It is very difficult to get funding support. But the PTA is behind us and has raised over \$10,000 to purchase hardware and software. Also, we are starting other fundraising activities. In addition we are working with business partners and universities to channel money. The 501(c)(3) has been put on hold. We now have a major push to work on getting the technology infrastructure in place first. Then we will be able to give teachers hands-on training.

Real Planning Practice: Theory-In-Use

The gap in planning occurs when the real planning begins. The following findings reflect how the planners in this study practiced planning -- not what they said they were going to do, but what was observed that they did. The theories-in-use models included real planning problems encountered by the planners.

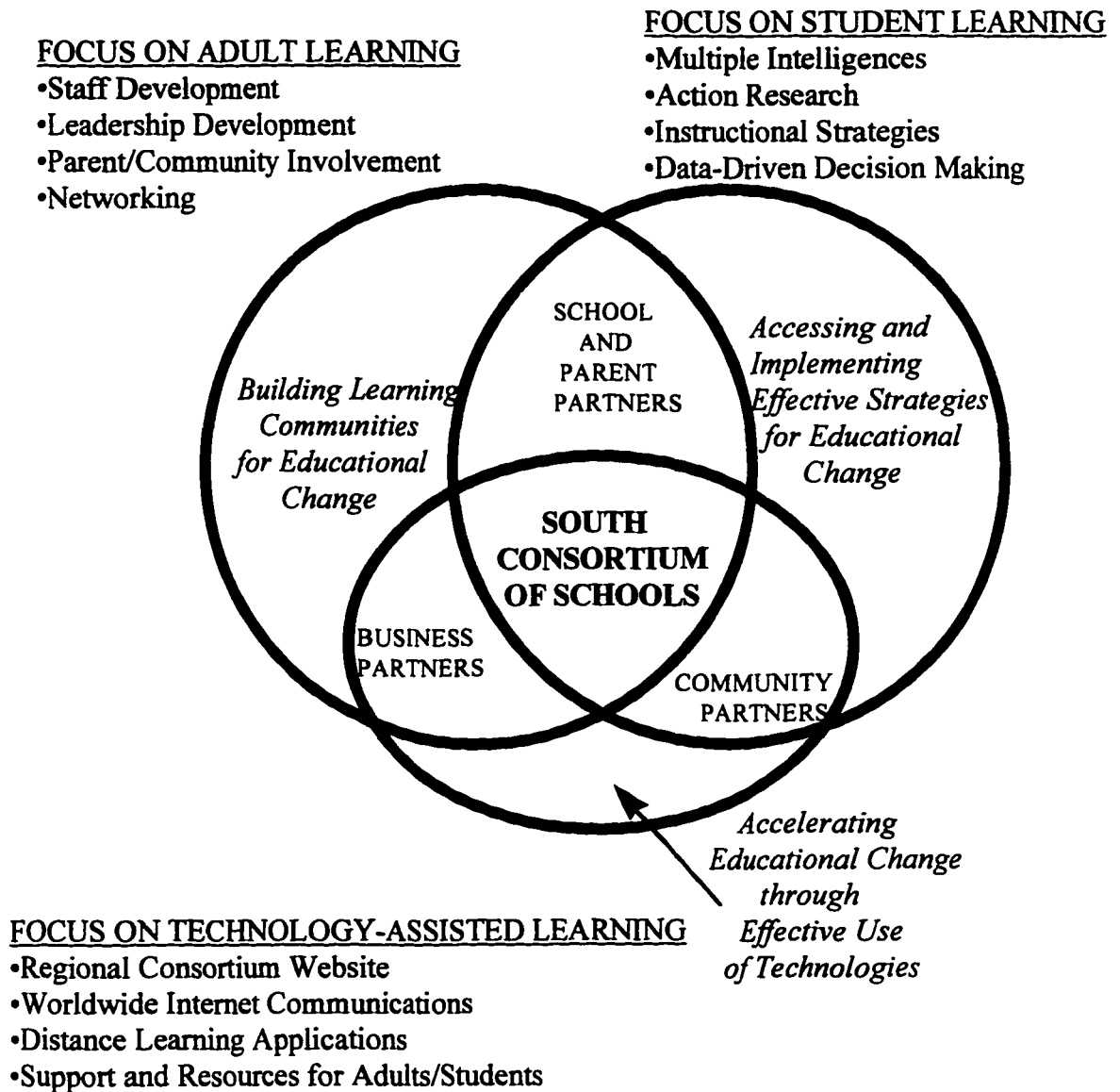
Consortium: Future Goal to Expand Technology Component

The Consortium's theory-in-use was similar to the espoused theory (see Figure 4). As observed, clear objectives were provided and program planning tasks were conducted as a resource within the link of community, businesses, schools, and parent partners. The three components of adult learning, student learning, and technology-assisted learning were emphasized from the beginning of the organization. Adult and student learning were a natural extension of the parent organization that provided professional development to administrators and teachers.

As listed in the *South Center for Educational Leaders Annual Report October 1996*, 11 major professional programs were conducted by the Consortium during the year. Specific professional topics addressed throughout the year as listed on agendas included "multiple intelligences, developing communities, action research, and managing transitions." Although not included in the institutes of professional development, observations were made that the Consortium conducted meetings and training sessions on "creating a web site to address use of technologies." Also, the director focused throughout the year on "setting up the technology, getting that up and running so that we have a Web site so that we can start connecting them." In a grant proposal document, plans were being made to "build the Consortium's technology network to accelerate educational change focused on improving student achievement." By the end of the first year of operation, as mentioned in a newsletter, a Website was in operation to benefit member schools by "teachers learning from teachers, technical assistance from the Center staff, exemplary programs searched for school improvement plans, and obtaining research

Consortium's Theory-In-Use Model

Model for Achieving Systemic Improvement in Education



Source: Adapted from Cohn (1996)

Figure 4. Consortium's theory-in-use model

on content focus for school improvement. The only observed difference in the espoused theory and theory-in-use was that the director indicated in a proposal for future development that the technology component should be expanded to include “on-site support for schools, management of the Web site, and the promotion of member schools in teachers-sharing-with teachers networking program via technology.”

Banyon: Ready, Fire, Aim

A “ready, fire, aim” model was suggested by a participant as a description of the theory-in-use program planning practices at Banyon (see Figure 5). The school member explained, “I think it would be really nice to say we had a picture of where we were and where we were going to end. That really is not true.” This model used in practice was a broad based, nonlinear, shared decision making process with program planning tasks performed by several planners. A member of the technology committee commented about the program planning process: “I wish it were really clear and these are the steps you would take. Ours has been a combination of things.” Much attention was given to the “ready” part of the process in determining technology needs through the development of the school improvement plan, Blueprint 2000, school district plans, school wide surveys, teacher needs, student needs, and community school needs. Programs were put into action, or “fired” off, by a shared base of the technology committee, media center, community school, and technology teachers. Programs were determined not through one person or committee, but the process was “shared decision making.”

Banyon's Theory-In-Use Model

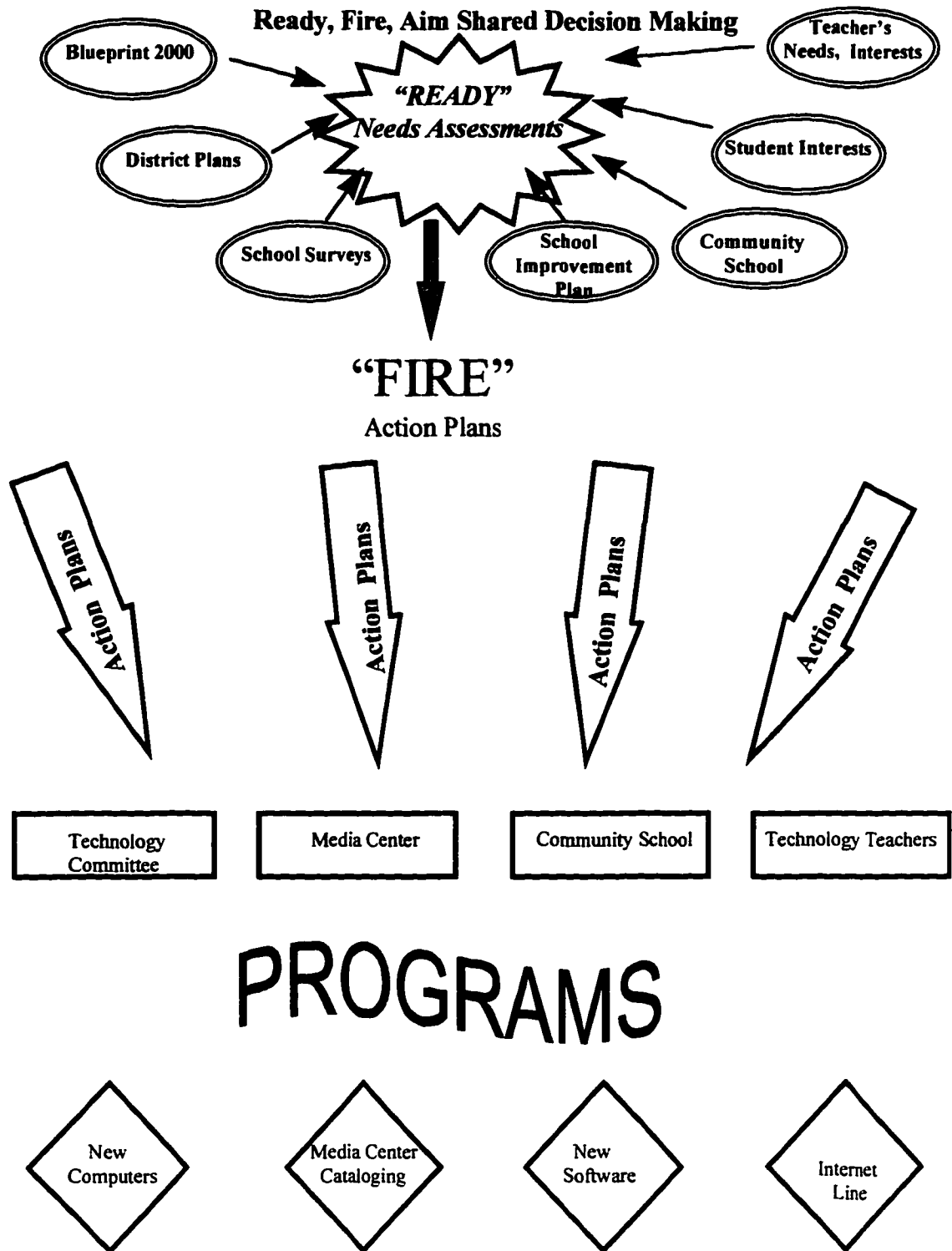


Figure 5. Banyon's theory-in-use model

Central Palm: Varying Volume

The Central Palm espoused theory was very similar to the theory-in-use model as analyzed in this study (see Figure 6). PTECH provided a clear picture of the planning roles and power structures in which interests were negotiated. The chairperson of the technology committee suggested that "clear and concise directions should be given to all of the major players in this effort." One difference between the espoused and theory-in-use included some program planning tasks conducted outside the committee. These tasks did not affect the overall results of the planing process. Types of tasks conducted outside the committee included the school administrator networking with universities to provide technology services and personnel decisions to employ a technology network administrator. Another tasks included needs assessments conducted by the media specialist. She stated, "I sent out a notice to the teachers that I have money for AV and you can be specific or you can just say I need some videos on Paul Revere." Also in the theory-in-use, some planners participated more than others. The technology teacher commented, "There is a certain group that is on the Internet. The general faculty is in awe when PTECH says all these things about getting on-line -- there are about 15 of us that have already gone beyond that."

Managing the Tasks of the Process

The findings in this section suggest that the three cases focused on creating a planning framework. In building a foundation major needs were assess. Those needs for the three cases centered around equipment, networking and training needs. Planning processes progressed when planners addressed specific objectives. A desire of all cases

Central Palm's Theory-In-Use Model

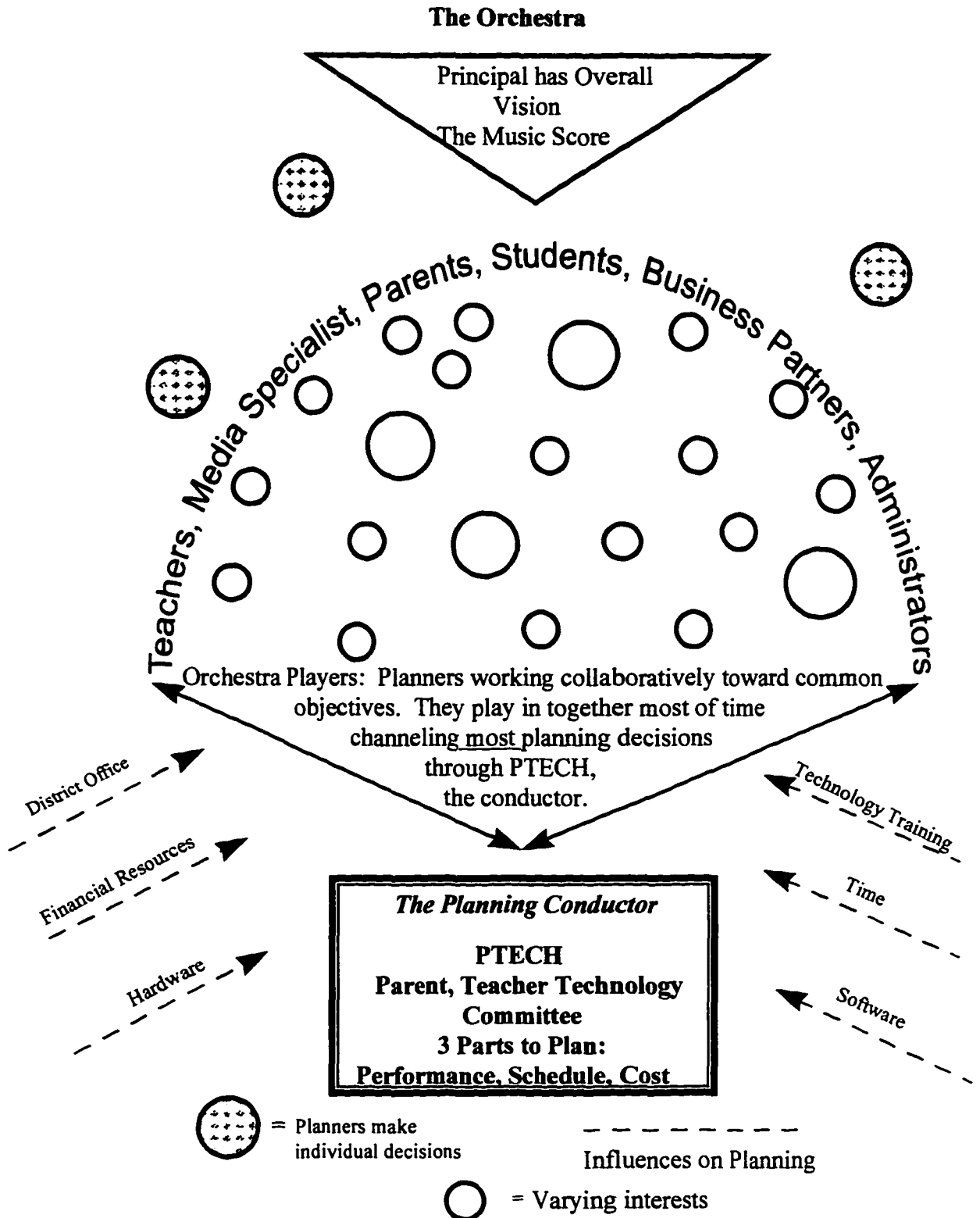


Figure 6. Central Palm's theory-in-use model

was to have multiple planners. The last section shares different views on planning to develop curriculum or to purchase equipment.

If You Fail To Plan, Plan To Fail

Each site was working on a comprehensive planning process for developing technology programs. Key persons were observed at each site to be experienced managers and used their skills to organize a planning process. The Consortium director, by virtue of her position as mentioned in the proposal document to “have been experienced in programming for human resource development” had a successful background in planning programs. She went immediately to the task of setting up a plan as mentioned in an interview,

Collaborate across five districts to form a consortium, how do you do that? How does that program develop? Within those confines is the technology feature. Now that we have a captive audience of 20 schools, if we could set up a network using technology, it could benefit the schools. It is going to get very sticky in the bureaucracy serving each school with technology.

The director mentioned direction for the process: “If we can start developing a proposal, I bet that by next year they could be up and running. We would start with infant steps and by the end of the year have a proposal as to exactly how this should be set up.” She continued, “I would like to develop the idea and present it and do whatever surveys we have to do . . . so that by next year we’ll have something.” The director asked for help from a technology consultant to devise a proposal for developing the technology component of the Consortium organization (see Appendix L).

The technology chairpersons at Banyon and Central Palm had business backgrounds that included experience in establishing a planning process. The chairperson at Central Palm described his planning background, "I have been used to what is called the systems engineering methodology that looks at big issues and puts that into workable action blocks into a hierarchy of relationships . . . Being a business person, my experience has taught me that if you fail to plan, plan to fail." He continued, "There is enough technical and managerial experience within the board to be very successful at this." Banyon's chairperson mentioned frustrations in "working on a methodology of how to create a technology task force." He explained,

I come from a business background of implementing business strategies and creating task forces. But to be honest about it, if you are going to create task forces for certain problems, you need a certain amount of people to help. We haven't had enough people to show up [at technology meetings].

Needs Well Assessed

Assessing program needs was a continuous process, formal and informal, used by all cases to determine objectives. Formal processes included a survey of Consortium schools "to determine technology/telecommunications capabilities" (see Appendix M). The Consortium also used formal focus groups to "learn the views of teachers and administrators." At Banyon, the lead teacher mentioned a formal school wide assessment process, "We do a self appraisal system: what kinds of things like inservices, programs, or training you'd like to do in order to meet those needs." Other needs to request software were assessed through both media specialists. As the Central Palm media specialist commented, "I sent out a notice to teachers, that I have monies, what would you like?"

PTECH at Central Palm “sent out a survey asking the teachers what they had” and the resource teacher “used a training survey to find out what kind of training teachers needed.” Examples of an informal means of assessing needs was to “sit down and talk” and to “have meetings with the principal and the staff to come to a consensus that this was the right way to go.”

Agreement on Program Needs

Participants in the cases studied were in agreement on meeting equipment, networking, and training needs. Needs indicated on the Consortium survey were “need funding to reach the appropriate tech level in hardware, software, phone lines and wiring,” “where can we get more machines,” “network manager needed,” “retrofit, updated hardware, teacher training” and “what provisions can or will be made for schools who do not have network capabilities” (see Appendix N).

Those needs were corroborated by comments from Consortium focus group and Banyon and Central Palm participants. In focus groups, an administrator mentioned, “We are not up to snuff with technology. We need some kind of Internet technology. On-line communication is an attractive option. This would alleviate time travel constraints.” When the technology chairperson at Banyon described the needs of the school, they were listed as “communication, teacher training, hardware-software issues, and technology curriculum.” Several participants at Central Palm agreed on needs. The principal mentioned, “I have the best teachers in the entire county and not the equipment to give them the tools that they need in order to do their job effectively.” Both the media specialist and administrative assistant agreed, “our teachers need training.” The

technology chairperson at Central Palm listed an immediate need to “put the computer infrastructure in place first, then to provide hands on training.”

Success in Following Objectives

In each case, when specific objectives were the focus of the planners, the process progressed. The chairperson at Central Palm described a need to provide overall objectives to the committee with his comments, “Clear and concise directions should be given to all of the major players in this effort” and “If we start establishing the goals and objectives and all of the actions required to meet them with we will be successful.” An administrator paralleled this statement by adding, “We are in the process of setting a time line. We have deadlines and time lines that we must follow.” The lead teacher at Banyon said, “When teachers are given a direction it is amazing what they do.” The Consortium director commented, that the first objective was “to set up the technology . . . so that we have a Web site so that we can start connecting them [the schools] with Internet.” As observed at technology meetings, creating a Web site was kept as a focus and by the end of the first year of operation, a site was developed.

Through observations of meetings and by the collection of documents, a primary means of focusing on objectives during meetings was the creating of agendas. Before the monthly technology meetings at Central Palm, the chairperson of the committee would solicit concerns for the agenda from the planning community. The agenda listed such items as “inventory, Internet connection, update on Panasonic Foundation, Web page, PTAC charter and 501(c)(3) plan, PC Club, survey of parents, and Netday 96.” The person(s) responsible for reporting on those items was also mentioned. As observed at

Consortium board meetings, technology training sessions, institutes, and focus groups an agenda was presented to the participants.

Many Planners Lightened the Load

All sites either had or wanted multiple planners to be in the planning community. Observations of meetings and collected agendas indicated that the technology committee at Central Palm had monthly scheduled meetings before school in the media center with approximately twelve or more members attending. At least four of those present were parents. Two students, children of the parents, attended regularly along with teachers and administrators. Community partners also attended as needed. The meetings were open to all interested and each participant could share concerns. Banyon's technology chairperson indicated, "you need a certain amount of people" to carry out plans.

It was observed that the director of the Consortium invited a small group of persons from the member schools and an outside consultant to offer suggestions as how to continue with a viable plan of creating a Web site and networking member schools. She invited two technology persons from member schools, and a technology consultant met to provide directions for a plan. This group in turn suggested "having a meeting with teachers from schools to provide a framework for strategies on how to share with each other through the Web site." The group suggested who to include in the meeting: "People who are credible, competent, approachable, open to new ideas, and a volunteer who would only be obligated for that one day." The following meeting had over 40 administrators and teachers offering detailed suggestions on how to set up the Web site. The technology teachers at that meeting also set an action plan of "having a meeting with

teachers from schools to provide a framework for strategies on how to share with each other through the Web site.”

What Comes First, Curriculum or Equipment?

An observed concern at the school sites was how to balance acquiring equipment versus training teachers to integrate technology into the curriculum. At Banyon, the school improvement plan document corroborated an action plan mentioned by the lead teacher to “encourage the use of the computer labs to generate at least two technologically generated products each year, and continue to provide a computer resource person to assist teachers with integration of technology in their lessons.” The technology chairperson further commented,

A lot of it is exploring, combating the fear. I think the staff here is coming along well with technology, but learning it and then implementing it into the classroom are two different things. That’s where I think it gets tough. I don’t know if there are too many people in any of the schools who are fluent in implementing technology into the classrooms. One, there is a problem with not having technology to be able to implement it.

As noted in a planning document of Banyon’s planning priorities, “curriculum development for sixth, seventh, and eighth grade” was the last priority of their program plan. Teacher training was second and equipment was third priority. Another remark by the chairperson related, “The CD-ROM computers we have in that one lab are so nice; there is something that you can do in the classroom with the kids with that computer. So we have tried to figure out what that something is through this technology committee.”

The plan at Central Palm as expressed by the technology chairperson was to “first provide the technology infrastructure, then the teachers can receive hands on training.”

He continued,

And you know the easy part will be for computers, network, Internet access, but the difficult part is going to be measuring how teachers are going to be utilizing this technology in the classroom . . . that is probably the most difficult part of this project.

A resource teacher at Central Palm responsible for setting up staff technology training stressed, “It is important that classroom teachers be involved in the planning of the vision because they have the best perspective on how they see technology being integrated in their particular curriculum.”

Summary

Similarities expressed in the three cases were a desire to have a planning model that used multiple planners to address specific objectives. The three cases focused on creating frameworks for the planning process by working on models or suggested procedures that would make planning more effective. A main activity was determining through needs assessments where they were and where they wanted to be. Objectives to be attained were obtaining hardware and software, increasing networking capabilities, and expanding training programs. The overall stated goal in developing technology programs was the improvement of student education. What looked different about the program process of the three cases were the managerial skills of the planners, objectives focused on, tasks used to meet objectives and emphasis of securing equipment versus stressing integration of technology into the curriculum.

CHAPTER 6

NEGOTIATING TO WIN

Theoretical perspectives in Chapter 2 refer to the importance of negotiation of power and interests in the program planning process. What really matters in program planning is that program planners must responsibly learn to negotiate power and interests through program planning tasks embedded in social environments (Cervero & Wilson, 1994, 1996; Forester, 1989). The significance in program practice is not in the execution of planning tasks but in the political and ethical consequences of whose interests come to the foreground of planning and whose interests are downplayed.

The lens for analyzing negotiations of power and interests in this study was the bonded rationality theory as discussed in Chapter 2. Using the premise of bonded theory, power and interests relationships were assessed by describing the planning contexts on four levels, I, II, III, and IV (see Table 6). The higher the level, the more complex the planning situation as to number of planners, plan setting, problem definition, information manipulation, and time available. Findings on how power and interests were negotiated are presented through experiences shared by program planners and through observations and documents obtained.

Table 6

Bonded Rationality Framework

Type of Bondedness	Program Planning Environmental Contexts					
	How Many Planners?	What Is Planning Setting?	How Is Problem Defined?	What Kind of Information Is Available?	How Much Time Is Available?	What Is Best Negotiation Strategy?
Unbounded	1 Planner: utility-maximizing, economical rational actor	1 Room: closed system	Well-defined	Perfect	Unlimited	Solution Techniques & Algorithm
Bounded I Individual Limits	1 Planner	1 Room: Open to other planners	Ambiguous	Imperfect	Limited	Satisfice: Hedge, lower expectations
Bounded II Network	Several planners: varying skills, cooperative	Division of labor among planners	Varying interpretations	Varies in quality, not always available	Varies with planners	Networking: relationships with those of similar interests
Bonded III Pluralist	Several planners: competing power and interests	Variable access to planners	Multiple definitions	Information used as power	Contested, withheld, manipulated	Bargain, increment, adjust, check
Bonded IV Political-economic	Planners in political-economic structures of inequality	Planners at different levels of power	Skewed: reflected in social sources	(Mis)information, contingent on planner's social consciousness	Haves: have more time	Anticipate, counteract, work for equality and democracy

Source: Adapted from Cervero and Wilson (1994, p. 128) and Forester (1989, p. 53).

Where Is Our Equipment?

The chairperson of the technology committee at Central Palm told his story of how he worked around equipment ordering delays from the district office.

One of the primary reasons I decided to get involved in PTECH was there was no clear direction as how to go about implementing technology plans in the school system. You can never get a straight answer from them. Case in point. We were waiting for the NT server that would give us the capability to have Internet connection and we were told two or three months ago that we would get our server sometime in the December time-frame. I found out that the server is going on bid toward the end of December. So our estimate is that we will not see a server from the school district until well into next semester. I found out that the reason the server wasn't ordered yet was the district was looking for input in terms of the server specifications. To help expedite the situation, I put a call into one of the technical people at the school district to see if there way anything that I could do to help. It has been a week. We haven't received any response from them. So we decided to use an existing computer as the server until the one ordered through the district comes in.

This story represents planning actions influenced by multiple power and interests.

The primary planner, the PTECH chairperson negotiated a common interest of the school planning community to get an NT server to connect to the Internet. As shown in the community findings section, the technology chairperson was in a position of power as the recognized chairperson of the PTECH committee. As observed, he had technology information available to him through his position as chair of the technology committee and through experiences of managing a computer business. What he did not have was the information concerning why the server had not yet arrived from the district office. He took time to find out that the reason the server had not been received was that the district office was seeking certain specifications before ordering. He also used his time in a bargaining strategy to counteract the time needed by the district to make a decision by

making a face-to-face inquiry. The district office had power by virtue of having control of the purchasing process. Information was distorted as Central Palm did not know why the server had not been ordered. The conditions of the planning actions placed this activity in between bonded rationality levels III and IV, termed pluralist and structural legitimation.

Bartering For Services

A technology teacher at Banyon, also the chairperson of the technology committee, told how he negotiated with a private provider to get Internet service in his classroom.

I needed money to be able to buy a private provider. I was using a free service but there was a slim chance that I could get on during the class time. The standard services were 20 dollars or more a month and where would I get that money from the school. So I began talking to a local company and they said I could have an entrance free. I told them that I would put their name as thanks in the school paper for them.

The planning practice in this story is summarized as one planner negotiating interests with an Internet company who could provide service and negotiating within the school's limited budget. The problem was well defined. How could Internet be provided to a classroom? Time was power in that the technology person took the time to negotiate with the computer company to provide a service for students. The teacher used a strategy of satisfice or lowering his expectations of what the school budget could provide. He also used strategies of networking with computer companies and bargaining with them by offering to use the school newspaper as a source of an advertisement for the company. The power and interests in this situation would be described as having elements of levels I, II, and III of bonded rationality.

Persistence and Patience Pays Off

A teacher at Banyon school told the story of how the school negotiated with the district to create a sixty-station computer lab.

Because of the large number of portables, we decided that converting our large former shop room would be better and have a 60-station computer lab to bring in two classrooms to do interdisciplinary work. When we first started talking to the school district, they didn't want to convert the room and mentioned that it would be too expensive to air-condition this large room. Bit, by bit we convinced the district office that this was a good plan. We first set up the computers on tables and the room was painted. Then we asked that the computers be networked and they were. Then after the room was painted and the room wired, the district office agreed to put in a new floor. Then the big fan vents were covered and three air-conditioning units were put in for us. The more you hope and the more you empower people to make things happen, it happens!

This story was an example of bonded IV rationality framed in a political-economic environment. The power and interests structures were unequal. The school did not have a 60-station computer lab, but they wanted one. They were dependent upon negotiating the powers of the district to counteract the reluctance to install a lab. The school used time as power as shown in their persistence and patience to continue negotiations until the objective was met. Power and interests of the school were expressed as a group effort. Negotiation tactics used included conversations with the district to convince them that the plan was good. The school knew what objectives they wanted to achieve and continually worked toward those goals.

A Different Approach

A means of negotiating power and interests at Central Palm was the creation of an alternate method to raise money and manage funds to promote the technology planning process.

We need to look to other sources outside the school, partnerships with universities, businesses, anything that I can do that will give me the edge to getting technology into the school, because we don't have a lot of money designated for it. We have PTA fundraisers . . . tap any grants and people that we think have the knowledge to help us. Sometimes we have found that just having people is more important than having the funds. If you have the people with the knowledge, they can get you the funds. The parents are looking to get a 501(c)(3) that will be an organization that the parents can use to raise money for the school. I see it as a means to buy materials that we will not get any other way.

This planning situation was classified in the fourth level of bonded rationality, political-economic. The equipment have-nots, at Central Palm, showed an interest in forming the 501(c)(3) to provide funds that they would have in their control to purchase equipment for the school and thus become haves. They were attempting to use a different strategy of forming a private organization to work around a lack of available funding to purchase additional equipment. The formation of the organization entailed a social consciousness concerned with providing technology programs to students who otherwise would not have exposure to technology.

This Will Make Your Job Easier

The principal at Banyon strongly influenced site negotiations. He explained,

When I first came here, the instructors were very limited [in technology]. I purchased and we started in with electronic grading. I introduced it to the staff. The first years I said anybody who wanted to could start using the program. It grew. Three years after we started, I said everybody would be on it. At that time, maybe 70 percent of the staff was on it and the other 30 percent were kicking and moaning. When we ran work checks later, I would get comments such as, "Why didn't you make us do this earlier? This is so much easier."

Power of the principal's status was used to promote an ideal interest to begin a teacher's grade reporting system. This system was proposed to improve social conditions

by making the grading process easier and more efficient for the teachers. The principal was the primary planner and teachers also participated in the process through their input. The pluralist fourth level was evident as there were multiple participants in the process with varying interests. The principal had time to introduce and then implement the program. A negotiation strategy was first to give teachers an opportunity to try something new, then to bargain with them.

How to Network?

The Consortium planning process, as expressed by the director, was directed at establishing a telecommunications network.

Major concern for me is the setting up of technology to network . . . I would describe our role as being a liaison between each of the resources. First of all we would set up our own Web site. Second of all, are the telephone lines for the schools. Some do and some do not have telephone lines to connect them to the computers. I'm not worried about getting the computers because I think that schools can do that. I know that you have to set up strategies to get people to turn on the computer. The one thing that I do have with the Center is connections all over the country and even internationally, so I can connect people with good resources in a very short period of time. But I can't do it without the technology communications.

The director was a planner with expressed and real interests of wanting to connect all schools in the Consortium through a Web site. The other planners were the 20 member schools with interests of their schools' sites and the school districts. A major negotiation strategy was networking. Schools could be offered educational connections if they participated in the telecommunications network. This experience was bonded by levels II and III. Information was varied by accessibility. Some schools could get on-line. Others could not.

The Consortium invited two media specialists from member schools and one technology consultant to an initial meeting to help set the direction of developing a Web site to network the schools. The following were the participants' comments as written in the minutes from that meeting.

Strategies:

- Start with on-line schools
- Provide support services to schools that are not on-line
- Create a Web Site and List serve

On the Web Home Page create buttons linking to:

What is the Consortium?

Intake form to request resource information

Information on workshops/on-line registration

Counter to determine usage

Information of Consortium schools

Calendar of events

(Some buttons would require a password for Consortium members)

Possibilities for Making these 5 Goals Possible:

1. Have meeting with 4 teachers from schools for ½ day.
2. They would provide a framework.
3. This would be a day session.
4. Teachers to include: credible, competent, approachable, open to new ideas, volunteer.

5. Would be obligated only to that 1 day.
6. Purpose would be to provide framework for teacher sharing program.
7. Need to have teachers in different content areas.
8. Lunch will be provided, time will be 9-3.

This document summary showed how planners used power to set the agenda and to decide who to include in the planning process and who to exclude. The major strategy was to network to gain the ideas of other planners. The overall problem of creating a Web site was well defined, but as shown by the entries in this document varying interests were expressed such as how long the meeting would be and the obligation of planners to be invited. This planning practice contained elements of the networking level.

Summary

The bonded rationality theory provided a framework for analyzing the power and interests of the planning communities. The finding indicated that the experiences above could be classified in levels II through IV depending on the strength of the political conflict in the planning process. The type of negotiation used did not correspond exactly to the suggested negotiation strategy as suggested on the bonded theory table. For example, in the case of the technology teacher who was one planner, level I, he used a strategy of lowering expectations. However, he also used networking and bargaining negotiation strategies that were elements of levels II, and III. However, as mentioned in Chapter 2, real-life planning situations do not fit neatly into the suggested strategies of bonded rationality (Cervero & Wilson, 1994; Forester, 1989).

Negotiation strategies employed indicated resourcefulness, risk taking and persistence in working around and with barriers against meeting interests of the planning community. In all cases, the person conducting the negotiation was in a position of power either by role or by what they could do in return for the other party. All negotiators knew the specific objectives that they wanted to achieve. Face-to-face meetings, discussion, and personal communication with the other side were effective approaches.

CHAPTER 7

CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS

This study was an attempt to analyze the program planning process used by the South Consortium of Schools and two member schools within the Consortium to develop technology programs. The critical theory lens provided a way to analyze the study categories of program planning community, the program planning process, and negotiations of power and interests. Conclusions, recommendations, and implications are presented in this final chapter based on the findings obtained from interviews, observations, and document analysis of the study as presented in the categories of planning community, planning process, and negotiations of power and interests.

Conclusions

The first conclusions drawn were within the category of program planning community. The major influencing factor that affected program planning communities in this study was a national challenge to ensure new technologies support high quality learning, accelerate the use of proven technology innovations in education, and provide equitable technology access for all students (Clinton & Gore, 1996). The national agenda that challenged schools to use new technologies to improve education and increase economic competitiveness influenced planning communities in two ways.

The first impact was the encouragement of schools to form technology committees. This recommendation influenced the school boards in the districts involved in this study to require technology planning groups at school sites. The second influence was a charge for schools to form partnerships with parents, communities, and businesses.

One of the criteria for applying for a national technology challenge grant was the prior formation of a consortium including, educational agencies, institutions of higher education, businesses, academic content experts, software designers, museums, libraries, or other appropriate organizations. Partnerships and a desire to network were evident in each of the cases studied. My study supported the conclusion that partnerships enhanced the program planning process in three major areas: broadening decision making, forming networks, and parent partnerships.

Partnerships broadened the base for decision making by expanding the technology expertise and resources of the planning community. The Consortium used knowledgeable members from the business world and the community to enhance educational decisions. Resources in equipment and training were also added to the planning community through partnerships with businesses and universities.

Planning communities that engaged in and were effective in planning were communities that could network. Networking was referred to by the participants as important and could be obtained when through personal communication, computer linkages, and securing information. The main impetus of the Consortium was to build a strategic network of personal, professional and technological services. This networking,

describing a *Gemeinschaft* community, was to break isolation, share expertise, and increase communication.

Effective management skills of the planning community were enhanced by parent participation in the partnerships. Involvement of parents was an essential element in program planning practices in this study. Parents had a personal stake in improving the educational programs in their children's schools. As one teacher observed, "They are doing a great job for the kids and it helps that their kids are here, too."

The influence of the national challenge on the planning communities led to another conclusion that was consistent with the critical theory viewpoint and bonded rationality theory. The conclusion was that as the planning communities were comprised of an increased number of planners at different political-economic power and interests levels, the more complex the decision making process became. The planning communities in this study were influenced by varying power and interests relations. Those relations were among and between the Consortium director, individual teachers, school districts, Consortium board of directors, school members, community schools, community members, parents, students, universities, and business partners. Common interests shown in the planning communities were to increase technology programs and to provide more technology training. In this study, when relevant program planning was conducted, the process functioned in the face of diversity and multiple interests. Challenges facing the program planners in this study were characterized by limited funding and an increase in student numbers and diversity. Also, they were faced with pressures of school construction, staff growth and mobility, and need for professional development. Program

planning strategies employed were dependent upon determining the multiple power and interests of the planning environment.

The next conclusions concerned with the program planning process related to availability of adequate resources, development of viable models for practice, centering of objectives on acquisition of equipment, and influence of managers and leaders. Effective planning communities were ones that had time allocated to conduct meetings, could secure necessary information for responsible decision making, and had available resources. When time, information and resources were available, planners could volunteer in the planning process and train others in technology. As one participant commented, "You have to be committed to make this work." When time, resources, and information were not available, planners felt frustrations and made such comments as, "There just isn't any time to be able to do these things" and "But I am just one person."

Developing effective models for program planning as addressed in Chapter 2 involves considering how program planning tasks are going to be conducted while regarding power and interests of the social and political planning context. As suggested in the beginning of this chapter, the national challenge was a driving force in school districts. A conclusion of this study was that a viable program planning model addressing considerations of power and interests relationships was not available to the cases before planning began. Plans offered were based in classical language and were concerned with tasks such as developing narratives for selecting technology programs, budgeting considerations, and use of evaluation information for decision making. As one participant commented, "I don't think we have ever had a visionary model." Even though

conclusions were drawn indicating lack of consideration in developing critical theory models, planners did use a nonlinear fashion to include each of the planning tasks offered in the critical model of assessing needs, determining objectives, selecting content or methods, developing action plans, managing programs, and evaluating programs.

Another conclusion drawn on program planning models was when a program planning committee had a comprehensive espoused program planning model before they engaged in program practice, they were more likely to incorporate this model into program planning practices. This conclusion supported Argyris and Schon's (1974) theory that states that planners should go into a planning process with a flexible plan that allows learning and gaps to be filled during the planning practice. Comments from participants included, "Clear and concise directions should be given to all of the major players in this effort" and "If we start establishing the goals and objectives and all of the actions required to meet them with, we will be successful."

When planning communities went into the program planning process without a well-defined model to guide them power struggles were exhibited as were a lack of direction for meeting specific goals and objectives. Comments such as, "What is my role? Where do I fit in?" and "We really need help in what an overall plan should be" summed up the views of participants who felt uncomfortable with the planning model.

The conclusion concerned with the focus of planning objectives pointed to planners giving more attention on acquisition of equipment rather than acting on integrating technology into the curriculum. It can also be concluded from the findings that the program planning process focused on objectives of securing technology for

communication, application, and efficiency needs. These conclusions were contrary to what were stated as the primary goals and objectives to place integration of technology into the classroom as the most important result of developing technology programs. As mentioned in the *Technology Innovation Challenge Grant* (U.S. Department of Education, 1997), “these investments will be worthless unless teachers and students know how to use these tools effectively to improve education.” Also, as mentioned by study participants at all sites, “the main emphasis of this program is for the improvement of the student’s education; we need to be able to integrate technology into the classroom.”

An expected conclusion was that the program planning process must be anchored in proficient planner management. As shared by Houle (1972) in Chapter 2, the quality of the program planning process depends on the skills and the competence of the person making the choices. Efficient management qualities shown in this study were focusing the objectives of the plan, inviting participation from other planners, establishing supporting networks and collaborations, and conducting appropriate negotiations. As one planner stated, “We have put a lot of effort into planning.” What this did for the program planning process was to ensure that objectives were met, sufficient information was obtained to make responsible decisions, and that attention was given to planning details.

The critical theory literature did not adequately address the importance of a leader on the development of the program process. An outcome indicated in order to have an efficient program process, effective leadership is needed. In this study, leadership was apparent from two directions, the director of the Consortium and leadership from parents. The Consortium director’s leadership was an important factor as shown in the increased

the member schools from 20 the first year to 42 the second year. The parent leadership was characterized by such comments from the school staff as, "They have the vision for the technology program" and "I have empowered them to do what they think is best for our school." Teacher's mentioned that they "had faith in the principal to understand the total program" and "to do what was best for the school."

The third area of conclusions centered on negotiations of power and interests. Negotiations were crucial in making program planning decisions regarding power and interests of the planning community. It can be concluded that planners in this study conducted negotiations of power and interests within program practices. This practice is consistent with the definition of negotiation as a social and political strategy conducted within the program planning tasks that addresses the specific relations of power and interests in the planning community (Cervero & Wilson, 1994; Forester, 1989). Planners conducting the negotiations could be characterized by being in a position of power. Also, the negotiators knew the specific objectives that they wanted to achieve and were persistent in seeking objectives.

As expected, planners negotiated with, between, and among power and interests. Parents negotiated their own interests by planning technology programs for the educational betterment of their children. As one parent indicated, "this will help our kids." Negotiations between other's interests were conducted through phone calls, E-mail messages, conversations, and in meetings. As power structures changed, negotiations were important in redefining goals and objectives. As one participant explained, "By the

district's time lines, we are not to get to level five for another three years. That is unacceptable. With money from the PTA we can be there next year."

Negotiations in program planning practices supported the bonded rationality theory that suggests that real planning situations call for a blend of negotiation strategies. Some of the same elements of negotiation were used by the planners as suggested by the theory: lowering expectations of the school budget (satisfice), networking 20 schools and five districts (network), making face-to-face encounters (bargain), and anticipating the moves of the district office and organizing power to install a computer lab (anticipating and counteracting power and interests).

Consideration of negotiation of power and interests were compatible with the bonded rationality theory, however, were not incorporated into espoused models. This returns full circle to planners not having viable planning models available before planning begins. Program planning in this study was a complex, dynamic process that was influenced by multiple planners with varying power and interests. Negotiations were the main action of the planners. However, espoused models offered by the participants did not include planning for the negotiation of power and interests of the planning environment. As suggested by Argyris and Schon (1978) an important skill of planners is to discern incongruities of espoused and theory-in-use before the planning process begins.

Recommendations

In view of the conclusions of this study the question can be asked, What are recommendations for other educational institutions when planning technology programs?

Four recommendations are made for educational organizations to consider when establishing program planning processes.

The first recommendation is to recognize that establishing an espoused model is essential before planning practice begins. When forming the espoused model planners should be aware of and incorporate plans for negotiating power and interests of the planning environment. These plans should (a) consider how many planners are involved, (b) what are the skills, power and interests of the planners, (c) how is the problem defined and what are the different interpretations, (d) what information is available, and (e) how much time and resources are available to the planners. By addressing negotiation of power and interests when forming a plan, action strategies will be available to help analyze the thoughts and actions of self and others and provide insight for appropriate negotiation strategies.

The second recommendation is that in order to have an effective program planning process, good management and leadership are an essential element. Strong management and leadership qualities contribute to the program process by keeping a focus on goals and objectives, fostering a vision, keeping planners involved, empowering planners, encouraging partnerships and securing resources.

In times of social, political, and economic changes it is also highly recommended that close attention be given to the forming of partnerships to support the program planning process. An essential element to enhance the program planning process to develop technology should be a collaboration between the parents, communities, businesses, and schools. Partners should bring to the process a recognized commitment

and support of resources and skills that can be utilized to solve problems and make decisions that in turn will impact the entire community.

The final recommendation is that program planning for technology should have as the primary focus understanding how technology will be utilized toward integration of instruction, not on the acquisition of equipment. That is, technology should not drive educational changes but educational change should indicate how technology will enhance and improve education.

Implications for Further Research

The findings, conclusions, and recommendations of this study have several implications for further research. The implications are based on the paradigm shift that information technologies will change the look of teaching and learning. The traditional classroom represented the teacher imparting knowledge to the student in lectures or notes. With new technologies, students have instant access to world-wide information anytime with or without the assistance of teachers. Society is adopting new technologies in this information age and in turn will influence the way education is presented using technology tools. These implications are presented to stimulate new strategies for understanding the social context of technology program planning affected by how power and interests influence the program planning process.

Negotiations were the central form of action in program planning. The first implication is that further qualitative as well as quantitative studies need to be conducted to understand the character of negotiating power and interests as an essential element in the program planning process. A Delphi technique would be one method of perceiving

different kinds of negotiations and the role of interests and power. Elements of negotiation of power and interests could be addressed by understanding plan setting, planner personal characteristics, identification of power and interests, success of various types of negotiations, decision making process, and inclusion of negotiation strategies in program planning models.

Further research also need to be conducted on whether or not specific models are more conducive to different kinds of social contexts. The primary research question could address if different kinds of program planning situations require different kinds of models. As part of this research agenda, another focus would be to address if program planning processes address equality that is grounded in political, economic and social rational: Will persons of economic power be able to participate more in the planning process and participate more in programs developed by the planners?

Another study to be considered could be on how stakeholders, particularly learners, are affected by the program planning process. As in planning for technology programs, What do the learners gain from the technology program planning process? Does it make a difference to the learners that a specific model or process is followed? In the same line of inquiry, research could be conducted that focuses on the power and interest relationships and how they impact the total planning relationship among the various stakeholders.

Further research studies are also needed on how the leadership process impacts program planning. What is not known at this time is how leadership style, qualities, and characteristics contribute to the program planning process in the design, development and

implementation of programs. Appropriate qualitative studies could contribute to this line of inquiry.

The program planning process is a necessary component in building a solid educational enterprise that benefits and meets the challenging and changing face of education. With the new advances in technology it is important to plan for the integration of technology into the teaching and learning encounter. A responsible program planning process considers the power and interests of all the stakeholders who could be affected by planning decisions. Informed program planning practice ensures that that becomes a reality.

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Appendix A
Consortium Goals

GOALS OF THE CONSORTIUM

The *Florida Consortium of Schools* will be established to achieve the following goals by the end of the 1998-99 school year.

- To design, implement and evaluate a Consortium of schools that can be used as a model for establishing small, local networks in support of school improvement.
- To provide school leadership teams of teachers, administrators, parents and community representatives with advanced levels of professional development that will increase their capability to focus on problems and deliver programs that make a difference in student performance.
- To enable schools to engage in a research and technology-based process of continuous, accountable improvement that will become indigenous to each school's culture.
- To construct a caring, risk-free, mutual support system among consortium members that will enhance each school's progress toward change.
- To forge linkages with other consortia, educational experts and research centers that will enable consortium schools to benefit most economically from the best theory and practice in education.

Appendix B

Research Approval



FLORIDA ATLANTIC UNIVERSITY

777 GLADES ROAD
P.O. BOX 3091
BOCA RATON, FLORIDA 33431-0991

DIVISION OF SPONSORED RESEARCH
(561) 367-2310
FAX (561) 367-2319

INSTITUTIONAL REVIEW BOARD Human Subjects Review Committee

MEMORANDUM

DATE: October 28, 1996

TO: Michael Galbraith,
Alicia Miller,
Educational Leadership

FROM: Don Torok, Chair *Don Torok*

RE: H96-87 "The Development of a Telecollaborative Program for an Adult Learning Community: A Case Study of the Program Planning Process"

The Institutional Review Board (IRB) has reviewed the above protocol. The Committee determined that the procedures described in the above protocol are **exempt** from federal regulations.

It is now your responsibility to keep the IRB informed of any substantive change in your procedures and if you encounter any problems of a human subjects' nature.

Please do not hesitate to contact either myself (6-1261) or Elisa Gaucher (7-2318) with any questions.

DT:ceg

Appendix C

School Site Interview Guide

SCHOOL SITE INTERVIEW GUIDE

Introduction

Permission to record
Confidentiality
Purpose of study - to explore your view of program planning process
Signing of Consent Form

Background Information

Work experience
Experience / training in technology
Committees, special projects - related to program planning for technology

Could you tell me the planning process for one of your technology programs?

Who originates idea? Assessments, Key people, legislation, suggestions?
How is plan analyzed? Justified? Literature review? Tested with others?
How are program objectives determined?
How is plan carried out? Selecting and ordering equipment
Tell me about administrative planning? Funding, ensuring participation
How is program evaluated?

What do you contribute to the planning process?

Volunteer / Appointed,
Level of involvement, Responsibilities, Role?

Do you think that there are factors outside the school that affect the planning process?

If so, how / why do you think they effect the process?
Mandates, Interests, Consultants / County Office; Business persons; Community
School, Parents.

Where do you see the program planning process leading future technology development? telecommunication, collaboration, building community

How do you see the Consortium involved in the program planning process for technology development in your school?

Program planning expertise, funding, network building

Who do you feel is the leader of the technology program planning process at this school?

What would you share with another group concerning planning technology programs?

Needs, barriers, program planning methods, consultants?

Summarize the main points of the interviewee's information. Give informant opportunity to make corrections or additional comments.

Appendix D

Administrator Interview Guide

ADMINISTRATOR INTERVIEW GUIDE

Introduction

Permission to record, Confidentiality, Consent Form, Purpose of Study

Background Information

How long have you been an administrator? Other experience, years, locations.

Could you tell me the planning process for one of your technology programs?

Who originates idea? Assessments, Key people, legislation, suggestions?

How is plan analyzed? Justified? Literature review? Tested with others?

How are program objectives determined?

How is plan carried out? Selecting and ordering equipment

Tell me about administrative planning? Funding, ensuring participation

How is program evaluated?

What do you contribute to the planning process?

Level of involvement, Responsibilities, Role?

Do you think that there are factors outside the school that affect the planning process?

If so, how / why do you think they affect the process? Mandates, Interests, Consultants / County Office; Business persons; Community School, Parents

Where do you see the program planning process leading future technology development?

telecommunication, collaboration, building community

How do you see the Consortium involved in the program planning process for technology development in your school?

Program planning expertise, funding, network building

Who do you feel is the leader of the technology program planning process at this school?

How do you view linking with other Consortium schools via the Internet?

Phone lines, Internet costs, collaboration

What would you share with another group concerning planning technology programs?

Needs, barriers, program planning methods, consultants?

Summarize the main points of the interviewee's information. Give informant opportunity to make corrections or additional comments.

Appendix E

Consortium Director Interview Guide

CONSORTIUM DIRECTOR INTERVIEW GUIDE

Introduction

Permission to record, Confidentiality, Purpose of study, Consent Form

Background Information

Work experience

Experience / training in technology

Committees, special projects - related to program planning for technology

Is the Consortium planning for the development of technology programs? How?

Who originates idea? Assessments, Key people, legislation, suggestions?

How is plan analyzed? Justified? Literature review? Tested with others?

How are program objectives determined?

How is plan carried out? Selecting and ordering equipment

Tell me about administrative planning? Funding, ensuring participation

How is program evaluated?

What do you contribute to the planning process?

Level of involvement, Responsibilities, Role?

Do you think that there are factors outside the Consortium that affect the planning process?

If so, how / why do you think they affect the process?

Mandates, Interests, Consultants / County Office; Business persons; Community School, Parents

Where do you see the program planning process leading future technology development?

telecommunication, collaboration, building a Consortium learning-community

How do you see the Consortium involved in the program planning process for technology development in Consortium schools?

Program planning expertise, funding, network building

What is your biggest concern with program planning to develop technology programs within the Consortium?

Equipment needs, funding, school involvement

Summarize the main points of the interviewee's information. Give informant opportunity to make corrections or additional comments.

Appendix F
Participant Consent Form

PARTICIPANT CONSENT FORM

I agree to participate in the research entitled "A case study: Program planning process for telecollaboration" which is being conducted by A. Christine Miller, Department of Educational Leadership at Florida Atlantic University, phone (561) 367-3550. I understand that this participation is entirely voluntary; I can withdraw my consent at any time without penalty or loss of benefits and have the results of the participation, to the extent that it can be identified as mine, returned to me, removed from the research records, or destroyed.

The following points have been explained to me:

- 1) The reason for the research is to gain information that can help the program planning process in the area of technology and telecommunication networking in learning communities.

The benefits that I may expect from the research are: a clearer understanding of the program planning process for technology development; knowledge from the researcher concerning the program planning process; results from the study available at my site; information that would assist my site in the program planning process to develop a telecommunications network.

- 2) The procedures are as follows:
will participate at my site in a minimum of one hour tape-recorded interview(s) conducted by A. Christine Miller that are specifically designed to understand the program planning process for technology development.
- 3) No discomforts or stresses are foreseen.
- 4) There is little or no risk foreseen.
- 5) The results of this participation will be confidential, and will not be released in any individuality identifiable form without prior consent, unless otherwise required by law.
- 6) The investigator will answer any further questions about research, now or during the course of the project.
- 7) I have been informed of the nature of the research and the risks, and I voluntarily agree to be a subject. I am at least eighteen years of age.

If you have questions about your rights as a subject, please contact the chair of the Institutional Review Board, Florida Atlantic University, (561) 367-2310.

Signature of Investigator Date Signature of Participant Date

Appendix G

Site and Activity Observation Guide

SITE AND ACTIVITY OBSERVATION GUIDE

Activity Code: _____ DATE: _____ OBSERVER: C. MILLER

Areas to observe

1. ***Setting*** - Physical setting of the activity: computer labs (technology): location of lab rooms, location of computers in offices, classrooms, teacher lounge, media center, arrangement of room(s) equipment, type of equipment (computers, modems, printers, networks), telephones near computers, room color and decorations, condition of computers, Internet capabilities, kinds of behavior the setting encourages, permit, discourage, or prevent, how people arranged in room. Who is included in activity? Why? Draw the setting.
2. ***Participants*** - Who are the key technology program planning persons?: how many, what are their roles, where are they located? Are parents/community involved in technology program? Who is using the technology? administrators, teachers, staff, students, parents, community.
3. ***Social environment*** - Ways persons interact, communication patterns - frequency and subject, decisions - Who makes technology decisions? How are they communicated? Documents of communication, meetings, newsletters? How does communication take place with parents or community involved with technology program planning?
4. ***Program activities & participant behaviors*** - How do participants interact with or about technology development? Is there a sequence of activities? What type of programs are being used on the computers? How do participants react to the activities? How do technology activities relate to grants / funds / school improvement plans? Where are those documents located? Is there evidence of parent/community involvement and what type? How do participants react to planning technology program?
5. ***Informal & unplanned activities*** - What happens during unplanned program time?
6. ***Nonverbal communication*** - How do adults use body language, and space positions.

Other considerations:

Use the exact language of the participants.

Be descriptive.

Observe what does not happen.

Note suggestions for document review: grants, school improvement plans, lesson plans, technology committees, school newsletters, bulletins, Key persons / role in planning technology program

Appendix H
Contact Summary Guide

CONTACT SUMMARY FORM

Site Code: _____
Contact Date: _____
Today's Date: _____
Contact Code: _____

What seemed to be the main issues of this contact?

Summarize the information I received (or failed to receive) on this contact.

Was there anything that was important, interesting, or that lead to further issues?

What new (or remaining) target questions / observations do I have in considering the next contact with this person / site?

Appendix I
Document Summary Form

DOCUMENT SUMMARY FORM

Site Code: _____

Document #: _____

Date -Rev.: _____

Today's Date: _____

Name or description of document:

Event or contact code, if any, with which document is associated:

Significance or importance of document:

Brief summary of contents:

If document is central or crucial to a particular contact (code), make copy and include with write-up. Otherwise, put in document file.

Appendix J

Comparison of Theme Clusters

COMPARISON OF THEME CLUSTERS

Themes extracted from significant statements

THEME CLUSTERS	TOTAL	Central	Banyon	Consortium
A. PROGRAM PLANNING PROCESS				
Beginning of Program Planning	16	6	5	5
Definition of Technology	3	0	3	
Needs Assessment Effective	35	18	16	1
Needs Assessment Not Effective	11	6	5	0
Objectives Determined	41	19	11	11
Objectives Not Determined	16	5	11	0
Method/Content Selected	37	9	23	5
Action Plan Developed	52	29	19	4
Action Plan Not Developed	11	8	3	0
Manage Program	18	9	8	1
Evaluation	8	6	2	2
No Evaluation	2	1	1	0
Sharing Program Plan	4	4	1	5
B. Program Planning Environment				
Program Planning Community	106	50	52	4
Information on Participant	86	33	50	3
Own Role in Program Planning	13	8	3	2
No Role in Program Planning	4	3	0	1
Leader of Program Planning	5	1	3	1
Interests of Program Planning Community	63	17	30	16

THEME CLUSTERS	TOTAL	Central	Banyon	Consortium
C. Factors Influencing Program Planning Process				
Community School Influence	27	6	21	0
Consortium Influence	33	3	24	6
Funding - Grants - Lack of Funding	34	21	12	3
Hardware Adequate	4	1	2	1
Lack of Hardware	14	9	5	2
Lack of Program Planners	9	1	8	0
Phone Lines / Internet Available	17	5	11	1
Phone Lines / Internet Not Available	26	2	22	2
County Office Influence	47	17	30	1
Lack of Time	19	3	15	1
Training Not Adequate	32	29	2	1
Training Offered	9	3	5	1
D. Negotiating Techniques				
These strategies were mention by participants. In data analysis of power and interests structures, additional negotiations were determined.	31	6	25	2

Appendix K

Consortium's Plan for Accomplishing Goals

Components of the Consortium's Plan for Accomplishing its Goals

- Forging a shared system of beliefs to underlay the change process.
- Providing in-depth training and support for educational experimentation and evaluation to make the change process accountable.
- Developing strong, functional school-community teams to carry out change initiatives.
- Establishing a safe, risk-free environment for experimentation and growth.
- Using communications technology and distance learning techniques to advance the change process.
- Exchanging local resources, innovations and strategies on a readily available basis.
- Accelerating exposure to best practices both at home and nationwide.
- Providing opportunities to learn from leading experts in the field.
- Expanding financial know-how and strategies for program funding and sustenance.
- Arranging for on-site visits, feedback and caring critique among consortium cohorts.
- Establishing a fast track on innovations and school improvement.
- Advancing teacher leadership and empowerment opportunities
- Advocating shared decision making and governance in real practice.
- Enhancing professionalism and the sense of connectedness with other educators.
- Garnering prestige and recognition for notable success.

Source: Adapted from Cohn (1996)

Appendix L

Consortium's Technology Plan

CONSORTIUM TECHNOLOGY PLAN

FOR THE SOUTH FLORIDA CONSORTIUM OF SCHOOLS

1996 - 1997

General Objectives	Tasks	Responsible	Target Date	Date Completed
Establish technology contact person at each site		Center		
Establish parent contacts at each site		Schools Center		
Contact Bell South to determine what type of technical assistance is available		Center		
Obtain a copy of the DOE State-wide technology objectives		Center		
Review available technology plans of the five counties by contacting the technology administrators		Center		
Review literature of telecollaboration programs		Consultant		
Identify and prioritize SFCS overall goals and objectives of proposed technology program		Center & Board of Directors		
Match goals and objectives of SFCS Center and school groups		Center Consultant		

General Objectives	Tasks	Responsible	Target Date	Date Completed
Match goals and objectives of SFCS Center and school groups		Center Consultant		
Design evaluation plan		Center		
Interview counties with efficiently operating technology communication systems to determine equipment components of a user friendly system		Center Consultant		
Gather equipment specifications from local communication network businesses		Center Consultant		
Conduct equipment / network surveys of the Consortium schools and Center for equipment presently in use		Center Consultant		
Develop surveys/ interviews to determine: skill level of participants & perceptions of how technology will enhance collaboration		Center Consultant		

General Objectives	Tasks	Responsible	Target Date	Date Completed
---------------------------	--------------	--------------------	--------------------	-----------------------

Establish a communication network & WWW Page for Consortium Center		Consultant		
List overall equipment needs and costs to plan technology network		Center Consultant		
Design training plan for participants based on types of programs		Center Consultant		
Prepare budgets for securing equipment		Center		
Investigate funding sources for purchasing equipment		Center Schools DOE Bell South, etc.		
Interview administrators, teachers, and parents regarding participation in the technology program planning process		Consultant		
Provide continuous assessment and evaluation				

Developed and Submitted by C. Miller

Appendix M

Consortium's Technology Survey

SOUTH CONSORTIUM OF SCHOOLS
Technology Survey for Telecollaboration

The mission of the Consortium is to *build a strategic network of personal, professional and technological services for the ongoing, accessible support of schools who have made the commitment to transforming into world-class teaching/learning communities*. To begin considering a telecommunications network for the members of the Consortium, we need to determine what type of telecommunications is currently available to members of the Consortium at the school sites.

Please take time to answer these questions about the availability and use of telecommunications at your facility and return the information before leaving the conference on Friday, October 11, 1996

Name of person completing information	Position
---------------------------------------	----------

School	Phone number	E-Mail Address
--------	--------------	----------------

1. Does your school have computer stations with telecommunications capability for staff use? Yes _____ No _____

If no, are there plans to implement telecommunications in the near future and what are those plans ?

If yes, please answer numbers 2-11

2. How many stations are available? _____
3. When are the stations available for staff use? _____
4. What type of computers are used? _____

5. Are there printing capabilities at the station(s)? Yes _____ No _____

6. Where are the stations located? _____

7. What type of communications service is used?
FIRN Yes _____ No _____
Other service _____

8. For what purpose do the staff members use telecommunications?
E-Mail Yes _____ No _____
Internet Yes _____ No _____

10. Does your school interact via telecommunications with other support systems?
School District Yes _____ No _____
Coalition of Essential Schools Yes _____ No _____
Other _____

11. Would it be helpful for the Consortium to have a WEB site to support an information sharing network for the members of the Consortium?

12. Please designate who you would like to be a technology contact person your school to gather and disseminate information regarding developing a telecommunications network, include his/her phone number / E-Mail address.

Name of Contact Phone number E-Mail address

13. What other concerns do you have about establishing a telecommunications network?

Thank you for taking time to complete this information by the end of the Conference on October 11, 1996.
Developed by C. Miller

Appendix N

Consortium Technology Survey Results

South Consortium of Schools
Analysis of Technology Surveys Distributed in October, 1996

School	CO. #	Printer	Location	Available	Type	Use	Service	Web	Concerns/ Future	
1	A	2	Y	Media Ctr.		Mac	E-Mail/Int.	FIRN	Y	
2	A	1		Classroom	Seldom	Mac		FIRN	Y	Need Funding
3	A	3	Y	Comp. Lab	School Hours	Mac IBM	E-Mail/Int.	FIRN/ AOL	Y	Where can we get more machines?
4	A									
5	A	0								Project 2 in retrofit project
6	B	4	Y	Classrooms Media Ctr. Office	Anytime	Mac- Power PC's	E-Mail/Int.	FIRN	Y	Retrofit/ Updated hardware/ teacher training
7	B									
8	B	N o							Y	Need help funding
9	B	2	Y	Media Ctr.		Mac	E-Mail/Int.	FIRN Inov. Zone	Y	June 97/ 6 classrooms wired to Media Ctr. / Lan costly
10	B	3 0	Y	Offices Classrooms	All day	Mac	E-Mail/Int.	FIRN, SEFLIN AOL, I- Connect	Y	Current Retrofit
11	B	N o	-	Classrooms	All day	Mac	E-Mail/Int.	FIRN	Y	Projected Nov./ 190 stations
12	B	1	Y	Media Ctr.	All day	Mac	E-Mail/Int.	FIRN/ Scholastic	Y	

13	C	?	Y	Media Ctr.	Anytime	Mac-IBM	E-Mail/Int.	ICAN ECT/ Com		T-1 line
14	C	3	Y	2 Comp. Lab 1 Office	Limited	IBM-Mac	Int.	FIRN/ AOL	Y	Receiving Training
15	C	4 0 0	Y	2 Campuses	All day	IBM comp.		FIRN/ ISDN line		
16	C	1	Y	Media Ctr.		PC's	Internet	FIRN	Y	E-Mail soon/concern funds
17	C	5	Y	4 Office 1 Media Ctr.	4 after school 1 all day	IBM Comp.	E-Mail/Int. Sch.Dist	FIRN	Y	
18	C									
19	D	3	Y	Classrooms	All day	IBM Comp.	E-Mail/Int.	FIRN	Y	Projected Jan. / 400 stations
20	E	4	Y	1 Media Ctr. 2 Comp. Labs 1 Tch. lounge	All day after class	IBM Comp.	E-Mail/Int.	FIRN/ Local Pvd.	Y	

Compiled and Analyzed by C. Miller 11/11/96

Grid Codes

- Co. = County School District
= Number of computers with telecommunications capability
Printer = Printing capabilities at telecommunications computer stations
Location = Location of telecommunications computer stations
Available = When are computers available for staff use
Type = Type of computers used
Use = For what purpose is telecommunications used?
Service = What type of communications service is used?
Web = Interest in Cosortium having a WEB site?
Concerns = What are other concerns about establishing a telecollaborative network?
/Future