THE RELATIONSHIP BETWEEN PROFESSIONAL DEVELOPMENT PROGRAMS AND TEACHER ATTITUDES TOWARD INTERDISCIPLINARY TEAMING

By

PAUL ALAN PHELAN

Bachelor of Science

Oklahoma State University

Stillwater, Oklahoma

1992

Submitted to the faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF SCIENCE
July, 1997

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Thesis Approved:

John E. Henderlink
Thesis Advisor

Susan E. Breck

Thomas C. Collins
Dean of the Graduate College

ACKNOWLEDGEMENTS

I wish to express my sincere appreciation to my parents Shirley Welch and Paul E. Phelan, for all of the encouragement and support they have given me. I would also like to thank my sister and brother-in-law, Lisa and Edward Shane for their never wavering optimism regarding all of my academic endeavors.

I would also like to express my deepest gratitude to my advisor and mentor Dr. John Steinbrink, who through instruction and example taught me how to be a school teacher. I will always remember very fondly those warm summer days in class, and of course the interesting political discussions that often followed.

Moreover, I would like to thank Dr. Susan Breck for introducing me to the world of middle school theory and practice. Her insights and encouragement have been a source of immeasurable inspiration. I would also like to thank Dr. Bruce Petty for generously agreeing to serve on my thesis committee.

Finally, I would like to acknowledge all of my instructors in the Department of Curriculum and Instruction for the wonderful experience I have had at Oklahoma State University.

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CHAPTER I

THE RESEARCH PROBLEM

Introduction

In an era when reform efforts come and go depending upon the prevailing trends in academia, interdisciplinary teaming has shown remarkable resiliency. A recent survey (Epstein and Maciver, 1990) indicated that 42% of all students receive instruction from interdisciplinary teams sometime between the grades five through nine. This represents a 500% increase over the last 20 years. A notable achievement, particularly when compared with the plethora of reforms that have come and gone with little effect over the same time span.

As Erb (1989) observed, "During the past decade teaming has emerged as one of the few substantial reform concepts and practices with the capacity to transform the way schools operate for teachers and students" (p.13). This broad reform movement reflects a confluence of ideas that theorists initiated in an effort to redefine both the scope and function of middle level education. Traditional junior high school organization centers around the academic disciplines: social studies, mathematics, science, and language arts. Within this model the academic discipline serves as the focal point for organizing curriculum, scheduling, and personnel.

In most instances this design represents a diminutive replica of the local high school. By the 1960's however, educators had begun to raise serious questions regarding the utility of the discipline based model. These educators insisted that middle level schools should engender a learning environment responsive to the needs of early adolescents. It was this campaign that brought about a reconceptualization of both the objectives and structural design common to junior high schools. Consequently, these reformers argued in favor of a developmentally appropriate pedagogy, calibrated to the psycho-social developmental level of the student.

Yet, in order for this aim to come to fruition an entirely new model for school organization would have to be designed. This emergent paradigm would have to address two fundamental obstacles intrinsic to the conventional model. First, teachers organized into discipline-based departments have limited opportunities to discuss student concerns with the student's other teachers. Teachers who share a common discipline do not often share common students. In fact, this arrangement facilitates teacher discourse on subject matter to the exclusion of students.

Thus, the first critical element of the new design required a cross-disciplinary grouping of teachers. This would provide a forum for continuous dialogue regarding common students. It also by proximity provided the impetus for these discussions to occur. As Erb (1987) reported, "Teachers in [interdisciplinary] teams engage in more frequent discussions with colleagues

about instruction, students, and curriculum than those not so organized" (p.4). The second problem that required attention was the school's authority system or governing apparatus. Orthodox models utilize a top down, hierarchical approach to school governance. Policy decisions are made at the administrative level and communicated to teachers through staff meetings or inner school memos. Within this system, teachers, along with all other school personnel, have little input in the formulation of school policy.

However, in order to effectively respond to individual student needs in any number of areas, greater autonomy would have to be afforded to teachers with respect to decision making. Therefore, the traditional governing system would have to be altered in two significant ways. Interdisciplinary teamed teachers would have to be given more autonomy to set classroom rules, disciplinary procedures, grading policies, and other procedural matters specific to their students. This change poses obvious benefits; teachers who work with students everyday come to know them as individuals.

The human dimension of education, as teachers are well aware, is the relationship that develops between teachers and students. Administrators are often far removed from the day to day realities of the classroom. Therefore, teachers are in a much better position to establish policies and procedures congruous to their own needs, and those of their students. Thus, team-centered autonomy is a central feature of teaming practice. Creating school environments responsive to the needs of early adolescents also required a

significant alteration of the administrative governing apparatus. This involved opening up the decision-making process for the formulation of policy at the building level. Decisions involving curriculum, intervention strategies, staff development, and any other issues not directly relegated to the team, also required a more collaborative approach. Input from teachers, students, and all other school personnel, is critical to this process.

To summarize, the interdisciplinary team structure addresses two areas neglected by the traditional model. The faculty is organized in a way that provides a support network for the student, and given more authority with respect to decision making at both the team and building levels. While the proliferation of teaming arrangements would suggest positive results overall, clearly different schools have experienced varying degrees of success with respect to implementation. Moreover, researchers have linked teaming effectiveness with the evolutionary development of teaming arrangements (George, 1982; George & Plodzik, 1989; Pickler, 1987). This evidence suggests that teams "evolve" or become a more useful educational tool over time.

Thus, determining those factors that are associated with team evolution is central to understanding why some teamed faculties experience more success than others. It is this research that offers the most possibilities for the improvement of current teaming arrangements. Staff development plays a significant role in the successful implementation of any reform initiative. Erb

(1988) cautions, "As with any educational innovation, team organization will not succeed without adequate staff development" (p.1). This warning underscores the importance of staff development when undertaking any far-reaching reform effort. Teacher attitudes toward teaming are also likely to have a significant impact on teaming effectiveness. Meaning, that our collective perceptions govern the way we operate within systems. Consequently, individual actions and reactions determine in large part how well systems function. This study examines both of these important factors: inservice training and teacher attitudes toward teaming.

Statement of the Problem

The problem to be investigated in this study is the relationship between professional development programs and teacher attitudes toward interdisciplinary teaming. The study examined practitioner's perspectives on a number of teaming related issues. In an effort to provide the most comprehensive overview possible, attitudes toward both the product and process of teaming were investigated. Thus, the study proceeded into four broad areas of inquiry: school governance, school operations, instruction, and curriculum.

Within these contexts teacher attitudes were assessed. The inservice variable was partially controlled through purposeful sampling based on a predetermined selection criteria. Two groups were selected in part based on

the amount of teaming inservice they have completed. The interview data obtained from both groups was compared to determine if staff development has a perceived effect on teacher attitudes toward interdisciplinary teaming.

Purpose of the Study

The purpose of this study was to examine the effects of professional development programs on teacher attitudes toward teaming. Thus, the central focus of this study study was to answer two critical questions: "Is there a significant relationship between inservice training and teacher attitudes?" and if so, "What is the nature of this relationship?" By examining these supposed interrelationships, we may better understand why some teaming arrangements produce superior results.

Significance of the Study

The results of this study should help further the improvement of middle level education in two important areas. Teachers implement educational theory into practice each day in classrooms across the country. Given the high mortality rate of most reform efforts, it is imperative that middle level educators from both a theoretical and practical background move forward in a spirit of mutual cooperation. In essence, this study seeks to add in some small measure, to the dialogue between theorists and practitioners. Teacher perspectives on teaming issues can provide an invaluable resource for the

continual evolution of teaming theory. Hence, this study attempted to ameliorate the theory-practice nexus critical for the improvement of middle level education.

The second and most practical aspect of this study was to examine the role staff development plays in shaping teacher attitudes toward teaming. Clearly, our attitudes have a great deal of influence on how we approach the business of educating children. Furthermore, teacher attitudes toward reform initiatives have a great deal to do with how they implement these initiatives classroom. So it is here that we seek to understand how teacher attitudes effect the way teams operate. These insights can provide the basis for the development of responsive inservice programs, capable of improving the quality of education provided by interdisciplinary teamed teachers. Erb (1988) suggests, "Those planning staff development must not overlook dealing with teacher affective concerns" (p.1).

Conceptual Assumptions

All knowledge and subsequent action in response to thought, evolve from a reciprocal manipulation between perceptions and beliefs. We do not generally think about or respond to things because of what we know, by in large it is how we know that constructs our subjective worlds. This directs us to one of the central assumptions of this study: teacher attitudes have a significant impact on teaming practice. The reverse should also be stated here: experiences

related to teaming practice have a significant impact on teacher attitudes. Thus, the nature of this study implies a reciprocity between these two forces. ". . .there is no such thing as value-neutral action; teaching practices whether consciously or unconsciously chosen, are an expression of the beliefs held by the person" (Dobson & Dobson, 1983, p.20).

Primarily it is this assumption that dictated the need for an in-depth exploration of attitudes, rather than an examination of observable phenomena. This required the use of an interview format, within which a number of issues could be freely discussed. A questionnaire, or scoring mechanism geared toward observable behavior would have been inadequate. While a great deal of data could be generated using an "objective" instrument, the parameters of the instrument would impose strict limitations on the ability to extract meaning from these complex relationships. In summary, the design of this study was guided by two central assumptions: (1) there exists a reciprocal relationship between teacher attitudes and practice, and (2) flexibility must be built into the research design if meaningful insights are to be found.

Limitations

The major limiting factor of this study was the small number of subjects surveyed. A total of twelve teachers were interviewed, therefore obvious problems with generalizing the data exist. A larger pool of subjects drawn from a statewide or national population would have provided a more comprehensive

overview of the effects of inservice on teacher attitudes. Regional attitudes, district policy, and other localized factors, could have influenced the results. Hence, teaming may well be perceived differently within different districts and/or in different regions of the country, irrespective of the levels of inservice provided.

Another limiting factor was the inability to employ a random sampling of subjects. Again this raises obvious problems associated with generalizing the data. Purposeful sampling was used in an effort to provide some control for the professional development variable. Given the limited resources of this study, random sampling would have produced far less relevant data. In order to have significantly increased the sample size for purposes of generalization, the interview format would have to have been abandoned. A questionnaire based study could have corrected this problem, however this instrument would not have provided the in-depth examination of teacher attitudes necessary for the purposes of this study.

An additional limiting factor is the ethnic composition of the district, within which the study was conducted. It is conceivable that more homogeneous or more heterogeneous student populations could influence teacher attitudes on any number of issues including teaming. As is often the case, ethnically diverse schools located in urban areas have a much more varied socioeconomic population to draw from. One final limiting factor deals with the urban area where the interviews were conducted. Individuals who live and work in smaller

communities and/or larger cities may well have different perceptions regarding the use of teaming. Teachers in urban areas are often more accustomed to reform mandates. Therefore, this should be weighed when contemplating the transferability of the data to larger districts and/or smaller districts.

Outline of Work

Chapter II provides a broad overview of current literature on interdisciplinary teaming. The first section of chapter II specifically addresses the role of teaming within the modern middle school. Thus, this section offers an overview of the theoretical rationale for the use of interdisciplinary teaming. The second section examines the organizational structure and process of team organization. The third section looks at school governance and effects on teacher efficacy.

The fourth section offers a review of social bonding theory and the fifth section reports student outcomes associated with teaming. The sixth section describes the often overlooked curricular implications of team organization. Finally, a review of the scarce literature on teaming and staff development concludes this chapter. Chapter III provides an overview of the methodology employed in this study, and a detailed description of the sites and participants selected. The research findings are presented in chapter IV, and chapter V offers conclusions and recommendations.

CHAPTER II

REVIEW OF LITERATURE

The Role of Interdisciplinary Teaming in the Modern Middle School

> One of the major functions of the middle level school is to provide early adolescents with a responsive educational program that will ease the transitions from childhood to young adulthood and from elementary school to high school (Clark & Clark, 1987, p.3).

Middle school reform has increasingly focused on the transitional aspects of early adolescence. Any complete review of teaming literature should be prefaced by a brief overview of stage theory, as the assumptions advanced by stage theorists provided the impetus for the initial reconceptualization of middle level schools. To better understand this, we can think of the modern middle school as consisting of three interrelated components: (1) the underlying theoretical rationale, (2) the structural paradigm, and (3) the mechanism or delivery system.

Stage theory provides the theoretical rationale for the existence of a distinct learning environment, congruous to the cognitive and psycho-social developmental level of early adolescence. The middle school represents the structural paradigm, or more specifically, the pedagogic adaptation of stage

theory to school organization. The third element is the interdisciplinary team, which provides the delivery system for school related services. Erikson (1958 & 1963) identified eight distinct stages of pycho-social development within the human lifespan. This stage-based developmental theory reflected his belief in the struggle between self and society.

Erikson characterized the central crisis of adolescence, as "identity versus role confusion." He argued that it is during adolescence that individuals begin to develop an identity that presupposes a self-conscious modality of awareness. Moreover, it suggests a view of self that is abstracted from the familial assumptions of childhood. Erikson contended that the adolescent steps upon the world stage for the first time as an individual, and seeks an identity within a larger social context.

Piaget (1969) developed what some regard as the definitive work on cognitive-developmental stage theory. His theory outlines four general periods of cognitive development the human lifespan. Piaget conceded that individuals move through the stages at different rates, yet he maintained that they passed through them in an "invariant sequence." Piaget's theory designates adolescence as a transition from "concrete" to "formal" operations. At this juncture the individual moves from a cognitive immediacy, toward a more abstracted level of intellectual functioning. Consequently, he argued in favor of an epistemology based on these changes in cognition, wherein the student's level of cognitive operations provides the basis for curricular design.

Clearly, if we are to accept the Clarks' argument that middle level schools should help ease ". . . the transition from childhood to young adulthood. . . ", then we are indeed consenting to the central thesis of stage theory. This being that people experience similar changes at roughly the same time in life. If this were not the case, then a singular school model would be sufficient for preschool through college. Thus, by keeping this in mind we can better focus our efforts on the central task of creating developmentally appropriate schools. Although by no means complete, Piaget and Erikson offer some valuable insights into the changes experienced by early adolescents. This includes dramatic changes in both cognition and self-awareness. At any given time, a sixth grade middle school class will have students who perform cognitive operations at both the concrete and formal levels.

This has powerful implications for the use of interdisciplinary teams for both the development of a flexible curriculum, and varied instructional methods compatible with the cognitive operations of all students. Likewise, adolescents are beginning to develop a sense of self, within the larger social context of their peers. A favorable resolution of this identity crisis is critical to the development of a positive self-image. Seen in this light, the benefits of interdisciplinary teaming are clear. Teams offer students ". . . the advantage of having a team of professionals who are working together to diagnose, instruct, and nurture each student in a warm, supportive environment" (Clark & Clark, 1987, p.3). Thus, the importance of team organization in middle schools cannot be understated.

As Clark and Clark (1987) suggest, "Interdisciplinary teaching programs are the foundation on which most successful middle school programs are built" (p.1).

Organizational Structure

While teaming arrangements vary widely from building to building, Alexander and George (1981) offer a definition of team organization that is widely accepted as a model in most middle school settings:

> ...a way of organizing faculty so that a group of teachers share (1) the responsibility for planning, teaching, and evaluating curriculum in more than one academic area; (2) the same group of students; (3) the same schedule; and (4) the same area of the building (p.115).

This definition suggests four necessary components for the realization of true team organization. The most obvious element involves the cross-disciplinary grouping of teachers. In most instances this includes one teacher from each of the core academic disciplines: language arts, science, math, and social studies. This core team structure provides the nucleus for team operations within the building. Additionally, by grouping students into recognizable teams, smaller communities are created within the larger more impersonal school population. The same rationale also supports the use of a common area within the building. These two components equate readily with Goodlad's (1984) concept of "schools within schools, " or more intimate learning environments. It is within environments such as these, that students are able to connect in a meaningful way with their teachers and peers. Finally, common

scheduling provides teachers with regular opportunities to meet, and offers a great deal of flexibility for adjusting the students' schedules as necessary.

Cooperative Systems: Effects on School Governance and Teacher Efficacy

Teamed teachers are given a greater degree of responsibility for school governance than those in traditional settings. Typical team tasks involve the establishment of guidelines for classroom operations including: rules and procedures homework, attendance, tardies, and intervention strategies. This autonomy is in direct contrast to the conventional model, in which all policies are set at the administrative level with little or no teacher input. In addition to increased teacher autonomy, team organization lends itself to a greater democratization of the school governing system. Teamed teachers generally participate in what George (1982) described as a form of representative government. Here the the old industrial model hierarchy gives way to a new cooperative system of school governance.

Most principals utilize the "team leader" concept in order to facilitate teacher input on policy decisions. Representatives from each team typically meet with the principal on a weekly or biweekly basis. In this capacity team leaders act as liaison between the administration and the teaching staff. For her part, the principal uses the forum to keep the staff abreast of the latest measures under consideration, while team leaders communicate the consensus of their

colleagues on a wide variety of issues. As Erb (1987) observed, "Where team organization existed teachers had access to principals on a variety of issues" (p.4). Hence, two significant changes occur in school governance as a result of team organization. First, the process or way decisions are made is significantly altered. The second and most obvious change refers to the final policy decisions or the end product of deliberation.

These changes in school operations are reflective of a larger trend toward a cooperative rather than competitive model, in the structure of both public and private institutions. With respect to the implications of this model for private industry, Goodman (1979) suggested that the team concept would "...provide greater democratization of the workplace, greater control of the worker over his or her environment and greater joint problem solving..." (p.33). Erb (1989) lends support to this argument suggesting that within schools team organization "...utilizes the most valuable resource available to schools, people. It harnesses human resources and pools their talents" (p.17).

W. Edwards Deming (1986 & 1990) the man generally regarded as the mastermind behind the rise of the Japanese automotive industry, advises that teamwork is the most important characteristic of a successful organization. Deming suggests that successful organizations are "...more interdependent than an orchestra. Without teamwork chaos is rampant." Furthermore he goes on to define a cooperative system as "...a series of functions or activities [subprocesses, stages--hereafter components] within an organization that work

together for the aim of the organization" (Latzko & Saunders, 1995, p.32). Thus, advocates of this model suggest that a commonness of purpose, calibrated with worker autonomy foster an intrinsic motivation lacking in the competitive model. This in turn leads to an individual commitment to quality work, wherein the use of human capital is optimized within the organization.

Applied to schools these principles enhance professional development in a number of ways. Extensive research has shown that under professional conditions teachers attain higher levels of job satisfaction and productivity (Lieberman, 1990; Lieberman & Miller, 1986; Little, 1982; Rosenholtz, 1989; Scott & Smith, 1987). Enhanced decision making authority, greater autonomy, and collegial cooperation, clearly ameliorate the professional status of those teachers so organized. Bloomquist (1986) reported that teaming increased staff morale and job satisfaction. Likewise, Lipsitz (1982) found that teaming enhanced professionalism through increased decision making authority.

Arhar, Johnston, and Markle, (1988) suggest that "...team arrangements reduce teacher isolation, increase satisfaction and improve individual teacher's sense of efficacy" (p.25). Hence, by all accounts teaming has a profoundly beneficial effect on teacher efficacy. It would also be difficult to imagine that this phenomena did not pose benefits for the students of teamed teachers as well. As noted by George and Oldaker (1985) "Previously isolated instructors became team members and developed the same sense of belonging and camaraderie they hoped to instill in their students" (p.28).

Social Bonding Theory

Social bonding theory also provides theoretical support for the use of team organization. Hirschi (1969) proposes a theory of deviancy suggesting that "...delinquent acts result when an individuals bond to society is weak or broken" (p.16). The implications for team organization being that students who feel attached to smaller communities within the school, are more likely to engage in behaviors that further integrate them into the community. This theory underscores the importance of attachment whereby individuals feel a "...personal stake in meeting the expectations of others and conforming to the norms of appropriate behavior as socially defined" (Arhar, 1992, p.147).

The reverse is also true, in that students who are attached are less likely to engage in deviant behavior, if in fact that behavior diminishes their relative acceptance within the community. Thus, the simple notion of positive peer pressure offers strong support for the use of team organization. Powell (1993) found that teamed "...students felt that they were part of a special family group within the school that nurtured and supported their needs" (p.52). Two separate studies conducted by Damico (1982) and Metz (1986) both concluded that teaming resulted in better interracial relationships among students. Within the team organized schools white students informed of having more black friends. Interracial cooperation both in and out of the classroom was more evident and teachers credited teaming for reducing racial tension.

Thus, teaming offers hope for both the improvement of race relations and for the reduction of disciplinary problems. This may prove particularly beneficial in urban settings where gang affiliation has become common, a direct result of the lack of positive support systems. Team membership can provide at-risk students with a positive peer group. This positive identification can serve to both improve self-esteem, while also reinforcing the concept of self to include the belief: I am a worthwhile person and a valuable member of my community.

Student Outcomes

While it is evident that where team organization exists schools have realized overall improvements in student conduct, it is not clear that these improvements have resulted in higher academic achievement for students. Research in this area has proven inconclusive and even contradictory. A number of studies have reported that teaming produced significantly higher student academic achievement in one or more content area (Georgiades & Bjelke, 1966; Sinclair, 1980; Goerge & Oldaker, 1985; Bradley, 1988).

However, other studies have contradicted these findings, concluding that traditional departmentalized arrangements produce higher academic achievement (Jester, 1965; Noto, 1972; Sterns, 1969). It should be noted as well, that within the studies themselves the findings often varied with respect to content area. Also, the age of all the research cited in this section should be weighed when considering the implications for current teaming arrangements.

Teaming theory has evolved considerably since many of these studies were conducted. Still at present a large body of research indicates no significant difference in student achievement irrespective of school organization (Geogiades & Bjelke, 1964; Oakland Public Schools, 1964; Zimmerman, 1962; Gamsky, 1970; Cooper & Sterns, 1973). Thus, the pedagogic implications of teaming in the strictest sense remain unclear. Although any number of factors could have influenced these findings including: teacher access to staff development, administrative leadership, community support, and student input regarding curriculum. Further study controlling for these and other variables would provide a clearer picture of the academic outcomes associated with teaming arrangements.

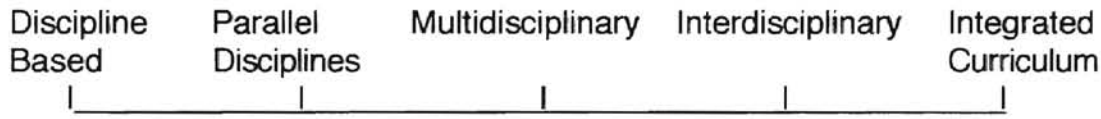
Curricular Implications

Until recently the middle school movement has largely neglected a serious discussion regarding the curricular implications of interdisciplinary team organization. As was reported by Lounsbury and Clark (1990) "Progress in climate is more apparent than progress in curriculum. Positive attitudes toward students, genuine concern for them and their developmental needs is evident, but the curriculum of content remains largely unchanged, even in many teamed situations" (p.133). A number of studies have concluded that recent middle level reforms have led to much more dramatic changes in school climate than in curriculum (Lounsbury, Marani, & Compton, 1977; Lipistz, 1984; Brazee, 1989).

Recently however, educators have begun to contemplate the idea of a responsive pedagogy within the context of an interdisciplinary curricular orientation. As Beane (1990) observed, "...it is apparent that the academic centered separate subject approach is not an appropriate way of conceptualizing the middle school curriculum" (p.104). This recent focus on middle school curriculum has led to an almost universal call for a more integrative approach. However, at present there is no consensus regarding the degree to which this integration should occur. The following continuum demonstrates the progressive levels of curricular integration.

Figure 2.1

Example Continuum of Curricular Integration



Source: Heidi Hayes Jacobs (1989). Interdisciplinary Curriculum: Design and Implementation. Alexandria, VA: Association for Supervision and Curriculum Development. (modified by author).

Discipline based curriculum refers to the traditional separate subject approach to instruction commonly used in most secondary schools. Within this framework, teachers operate independently and course content is determined exclusively within the academic disciplines. The use of parallel disciplines alludes to the practice of two or more instructors from different subject areas

sequencing their lessons to correspond around some predetermined topic. For example, a literature instructor may introduce a unit over Native American poetry to coincide with the study of plains Indian culture in American history. The term multidisciplinary suggests a more formalized effort among teachers of "related" disciplines to utilize the thematic concept in developing a unit of study. Interdisciplinary curriculum alludes to the use of a full range of disciplines within the school. The courses of study or units are specifically constructed to include both core academic and exploratory classes. The following model is commonly used for the construction of interdisciplinary units.

Figure 2.2

Interdisciplinary Concept Model

Source: Heidi Hayes Jacobs (1989). Interdisciplinary Curriculum: Design and Implementation. Alexandria, VA: Association for Supervision and Curriculum Development.

As evidenced by figure 2.2, the scope and sequence of course content is calibrated closely to the theme, problem, or question, around which the unit is constructed. Integrated curriculum intimates a total abandonment of the academic disciplines in favor of a fully integrative day. Some educators have

argued that school curriculum should be more reflective of everyday life. This position suggests that people use skills exclusively in combination to complete virtually every task. For example, home construction requires the use of mathematics, problem solving, reading and writing skills, and the ability to function effectively within a cooperative team. Thus, most things we do on a day to day basis require the use of skills in combination. For this reason, many have called for the move toward a fully integrated curriculum.

Others have more cautiously suggested using a combination of both discipline based and interdisciplinary study. Arnold (1991) cautioned, "Much in mathematics, foreign language, and studio art, for example does not fit easily into a theme approach and will be lost or distorted" (p.9). Therefore, Arnold and others have advocated the continued use of single discipline study in combination with interdisciplinary work. An alternative model proposed by James (1972) involves the use of a four-part curriculum. This curricular model includes the following: (1) interdisciplinary inquiry, (2) autonomous studies, including the academic disciplines, (3) special interest studies; and (4) remedial activities. While at present it is not clear which model or combination of models will best serve our students, it is clear that interdisciplinary team organization has powerful implications for the future of middle level curriculum.

Staff Considerations

When contemplating the move to interdisciplinary team organization,

administrators should be cognizant of a variety of considerations. Not the least of which is the planning and preparation necessary for a successful transition to entirely new operational paradigm. Fortunately as Erb (1987) reported, "Teachers nearly universally, report greater satisfaction with the conditions of teaching when organized into interdisciplinary teams" (p.6). Yet, the degree to which teaming will be successful in transforming the school into a more responsive learning environment is contingent upon any number of variables. As Meichtry (1990) cautions, "...many schools have reorganized into interdisciplinary teams with little knowledge or understanding of the conditions and skills necessary for a team of teachers to function as teams are theoretically supposed to function" (p.3).

The move toward true teaming as it is operationally defined has been variously described as an evolutionary process (Hall, Rutherford & Newlove, 1975; Hall & Rutherford, 1976; Pickler, 1987; George, 1982). The research suggests that teams evolve over time, becoming more effective as team members develop heretofore unneeded skills. Accordingly, Plodzik and George (1989) reported, "...evidence of a relationship between the stages of team development and participation in staff development activities" (p.16). Furthermore, the study went on to highlight "...the critical role of principals in helping teams reach full potential" (p.17).

This does offer evidence of the critical role staff development plays in the success of teaming efforts. Thus, careful consideration of a comprehensive staff

development program is an essential first step in the implementation of a successful program. Erb (1988) identifies five important elements of an effective implementation strategy. The administrations first task is to make the case that teaming is a better way of doing the business of education. Meaning, that teaming will in general offer a more positive learning and working environment for all of those concerned. Therefore, Erb suggests that addressing the "affective concerns" of the entire school community is important in the initial stages of the transition" (p.1). The risk here is all to clear, resistance from teachers, students, and parents, will be a major obstacle if teaming is viewed as a perennial reform mandate that is likely to be discontinued in the near future.

The second step involves the development of teaming skills necessary for individuals to work effectively in groups. Group problem solving, interpersonal communication, team building, and intrapersonal skills, are examples of the kind of competencies critical for the successful operation of teams (p.1). The third consideration involves goal setting. This is ideally viewed as a three tiered process. District goals are translated into building goals, which are ultimately used as guidelines for the formulation of specific team goals. Thus, Erb suggests the use of "goal statements" as a way of providing direction for teams (p.1). Hackman's (1990) review on effective teams also concurs that "When deadlines were absent, fuzzy or constantly changing, groups invariably encountered problems" (p.480). Therefore, goals can provide a constancy of purpose while also providing a criteria for team evaluation.

Erb recommends a "team evaluation" should occur at least twice annually: first at midterm and then again following the school year (p.2). This self evaluating process can offer a means for the continual improvement of team operations. The next feature entails the development of a "team identity" (p.2). It is in this step that teachers develop a close knit community that will serve as a bonding agent for their students. It is also important in this phase, that teachers develop a sense of camaraderie with their colleagues.

The final step involves reviewing the specific procedures and skills necessary for "effective meetings" (p.2). In order to effectively manage time, Erb suggests that team leaders should be responsible for seeing that an agenda is planned and followed at every meeting. Minutes should be carefully recorded and circulated throughout the building to keep other faculty members apprised of the matters under consideration. In summary, it is important to consider that a move to team organization represents a dramatic change in the way schools operate. Therefore, an effective inservice program should involve a comprehensive overview of the many important elements associated with the productive use of interdisciplinary teaming.

CHAPTER III

METHODOLOGY

Introduction

This is a qualitative research study designed to explore the relationship between professional development programs and teacher attitudes toward interdisciplinary teaming. A total of twelve teachers were selected for the study out of a total population of six hundred and five certified middle level employees within the Tulsa Public School System. Interviews were conducted variously with individual teachers and full teams. The teachers were asked questions on a variety of teaming related issues. The interview text was then analyzed to determine what perceived effects professional development programs had on teacher attitudes toward teaming.

Subject Selection

Three middle schools were chosen for the purposes of selecting the study participants. Pursuant to 45 CFR 46 I filed an application with the Oklahoma State University, Institutional Review Board, for permission to use human subjects in the study. On September 5, 1995 I received permission (IRB# ED-96-021) to conduct the interviews. In choosing the teachers for the

study, I used a purposeful sampling technique. Therefore, in order to explore the problem presented in this study a predetermined selection criteria was used to select the participants. As Patton (1990) states, "...the logic and power of purposeful sampling lies in selecting information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research..." (p.169). Thus, in order to investigate the problem presented in this study, subject selections were based on the following criterion:

1. the teams and individuals used in the study were selected in part based on the amount of inservice they had completed.
2. the participants had a common planning time with all other team members and met routinely at least once a week.
3. the participants generally conducted school business such as: parent conferences, IEP staffings, administrative meetings, as a team.
4. the participants consistently used the team forum to discuss student concerns such as: academic problems, intervention strategies, and social adjustment.

The principals of each of the three middle schools were interviewed to assist in finding potential candidates for the study and to obtain permission for conducting the interviews. In this phase, the school principals had a great deal of influence in selecting potential teams or individuals for the study. A pool of potential subjects were then contacted to determine if they met the above stated

criteria. Following these initial interviews I selected twelve teachers for the study. The participants were then notified and interviews were scheduled.

Description of Setting and Participants

The Tulsa Public School System is located in a metropolitan area with a population of 503, 341. There are 12 middle schools in the Tulsa system, with a total student population of 9111. The ethnic distribution of the entire middle school population breaks down as follows: 53% white, 33% black, 9% American Indian, 4% Hispanic, and 1% Asian. During the 1995-96 school year 50% of the student population was eligible for the free or reduced price lunch program.

Team A was selected from a middle school serving grades 6-8. A total of 559 students attended this school through the 1995-96 school year. The ethnic distribution of the school breaks down as follows: 52% white, 29% black, 12% American Indian, 4% Hispanic, and 1% Asian. During the 1995-96 school year 65% of the students were eligible for the free or reduced price lunch program. The team was comprised of six members. Two of the participants teach language arts, alternating literature and grammar. Social studies, science, and mathematics, were each represented by a teacher, and interestingly a librarian was included on this team.

Team B was selected from a middle school serving grades 6-8 with a total population of 409 students. The ethnic distribution of this school breaks

down as follows: 50% white, 38% black, 8% American Indian, 3% Hispanic, and 1% Asian. Through the 1995-96 school year 53% of the students qualified for free or reduced price lunches. Team B was composed of four members; a teacher from each of the core academic areas, social studies, mathematics, science, and language arts.

Two subjects A-1 and B-1 were selected from different teams at a third site. This middle school also serves grades 6-8 and has a population of 704 students. The ethnic distribution breaks down as follows: 80% white, 12% black, 5% American Indian, 2% Hispanic, and 1% Asian. During the 1995-96 school year 17% of the students were eligible for free or reduced price lunches. At the time of the study A-1 was in her second year as team leader. This instructor teaches both math and accelerated math to sixth and seventh grade students. The other participant B-1 is a veteran teacher and department chair of language arts.

Interview Format

A standardized open-ended interview format was used for the study. This interview format was chosen to minimize the interviewer effects on the study and so that all of the participants responses could be compared following the interviews. The reasons for this comparison are outlined in the next section. Patton (1990) offers a rationale for the use of the standardized open-ended interview technique:

> The basic purpose of the standardized open-ended interview is to minimize interviewer effects by asking the same questions of each respondent. Moreover, the interview is systematic and the necessity for interviewer judgment during the interview is reduced. The standardized open-ended also makes data analysis easier because it is possible to locate each respondent's answer to the same question rather quickly and to organize questions and answers that are similar (p.285).

The questions used in the study were formulated prior to the interviews during the time I was undertaking a review of teaming literature. A interview question guide (Appendix A) was developed and all participants were asked the same questions in the same order. The participants from Team A and Team B were interviewed with their teams. Participants A-1 and B-1 were interviewed individually. Each of the participants were interviewed for approximately two hours.

Teacher Attitudes: Basis for Analysis

All of the participants with the exception of two had completed some form of professional development on interdisciplinary teaming. Five of the six members on Team A had collectively taken part in an estimated ten hours of staff development. One member of Team A had completed no inservice. Participant A-1 from the third site had not competed any inservice, and was therefore grouped with Team A. These participants are collectively referred to as Group A in the study. When averaged for the entire population each member of Group A had completed just under 1 1/2 hours of staff development. Thus, the designation Group A refers to those teachers interviewed who had

completed little or no inservice on teaming.

The four members of Team B had collectively taken part in an estimated thirty six hours of professional development on interdisciplinary teaming. Participant B-1 from the third site had completed an estimated fifteen hours of inservice, and was therefore grouped with Team B to form Group B. Group B had collectively completed fifty one hours of teaming inservice. When averaged for the entire group each member of Group B had completed 10 1/5 hours of teaming inservice. Thus, the designation Group B refers to those teachers interviewed who had completed three or more workshops on interdisciplinary teaming.

In order to explore the relationship between professional development and teacher attitudes toward teaming, the participants were questioned on a variety of teaming related issues. The responses given by Group B who had undergone more extensive staff development were compared with the responses given by the participants of Group A. This comparison involved three components. First, specific inservice experiences described by Group B were calibrated with the participants' attitudes toward the use of interdisciplinary teaming. Thus, the first two components relevant to the study were areas of congruency within Group B between specific inservice experiences and teacher attitudes toward the use of teaming.

The third component relevant to the study were the responses given by Group A. Those areas of congruency (between inservice and teacher attitudes)

reported by Group B were compared with the responses given by Group A to the same questions. This comparison provided the basis for assessing the effects of professional development on teacher attitudes toward teaming. Those areas which reflect the greatest divergence of attitudes between the two study groups are reported in chapter IV.

Trustworthiness

The notion of trustworthiness deals with the researcher's ability to demonstrate that the findings of the study are valid. Lincoln and Guba (1985) offer four criteria for determining the validity or trustworthiness of a qualitative study: credibility, confirmability, dependability, and transferability.

Credibility. The credibility of a qualitative study is determined by the extent to which the findings are improved and confirmed by the subjects. Lincoln and Guba (1985) suggest that member checks are an effective tool for improving the credibility of a qualitative study. During the weeks following the interviews while analyzing the text, I made several informal member checks by phone with the participants. I initiated these member checks in order to both confirm my exegesis of the text and to seek clarification or improvement of any ambiguous areas.

Confirmability. The notion of confirmability deals with the researcher's ability to demonstrate that the research findings are supported by the data and that the interpretations drawn from the data are linear. Lincoln and Guba (1985)

suggest an audit by a third party as a means of confirming research. This study was conducted for the purpose of fulfilling the thesis requirement for a masters degree, therefore an audit of the study will be conducted by the members of the thesis committee.

Dependability. Dependability loosely correlates with the notion of reliability in positivist research. An acceptable method for assessing the dependability of a qualitative study is through the researcher's field journal. Spradley (1979) states a field journal should contain "...a record of experiences, ideas, fears, mistakes, confusions, breakthroughs, and problems that arise during field work" (p.76). During the course of this study I made extensive notes on all field work conducted. These notes contained the interview texts and regular notations of ideas I pursued regarding the conclusions of this study. This journal provides a written narrative of the evolution of this study.

Transferability. Transferability loosely correlates with the notion of generalizability in positivist research. Within the qualitative paradigm however, the reader (Erickson, 1986) determines whether the findings are transferable by examining the text of the study, and comparing the circumstances surrounding the study with his or her own specific environment. In this study I provide a description of the subjects, field sites, sampling criteria, and the basis for interpreting the relationship between professional development and teacher attitudes toward teaming. Hopefully, this will provide adequate information for the potential purposes of transferring the findings to another setting.

CHAPTER IV

INTERVIEW RESULTS

Introduction

For the purposes of this study, the term teaming is used to denote all of the various processes associated with the organization and delivery of educational services within the middle school setting. Put simply, teaming is a way of doing education. Therefore, this study took an expansive approach, examining attitudes in a wide variety of teaming related provinces. The responses given by the two study groups were contrasted. The areas where perceivable differences existed are presented in this chapter. It should also be noted that during the course of the interviews, the participants offered anecdotes and insights independent of the predetermined questions that were very useful in the effectuation of this study.

Overview of Professional Development

The participants were asked to explain specific experiences within the professional development programs they had completed. All of the members of Group B had attended three or more workshops on teaming and had been exposed to inservice, at least to some extent, on both the theoretical and

operational aspects of teaming. Curriculum, instruction, teaming skills, teacher roles, and team operations were cited by all of Group B's members as components of the workshops attended. A participant from Group B described a warm-up exercise at one such workshop that focused on teaming skills and teacher roles:

> We were all given a piece of a puzzle as kind of a warm-up exercise. Then the workshop presenter put her piece of the puzzle on the table, and then she asked the rest of us to help each other in putting in our pieces, while we completed the puzzle. I know it seems simple, but the whole idea...was by working together as a team we could get the total picture. In the discussion we had after the exercise...she kind of reinforced that...you might feel like you have nothing to contribute to a team but without your piece the puzzle is incomplete.

The participant from Group B who related the above story went on to share this interaction she had with the presenter of the workshop:

> While we were talking about the exercise I asked her [presenter] how the team leader fit into this. She said, well in this case I was the team leader because I brought in the puzzle and put down the first piece. What I got from that...is that the team leader's job is really just to set the agenda and kind of get things started.

The participants from Group B shared several anecdotes similar to the two cited above. Three of the teachers from Group B reported that they had attended workshops that contained components on both middle school and interdisciplinary curriculum. One participant from Group B characterized a workshop on middle school curriculum in this way:

> The main thing he [presenter] talked about at that workshop was the importance of finding out where [developmentally] the

> student is. Then you start at that point and build...I guess you could say its kind of a building process. That was different than what I was doing, because before I developed my part of our [I.D.] units based on what material I needed to cover. So, he [presenter] kind of showed us how to put together [I.D.] units from the student's standpoint.

The team leader from Group B reported that she had attended a workshop specifically concerning the role of a team leader. In a follow up interview she reported that the use of "goal statements" were presented in that workshop as a useful tool for managing team operations.

No member of Group A had attended more than one workshop on teaming. The participants from Group A characterized these workshops as introductory. They described these workshops as being primarily focused on the operational aspects of teaming, or more specifically how teams work. The phrases "trial by error" and "on the job training" were both used by the participants of Group A to describe how they had acclimated to the use of interdisciplinary teaming. The participants from Group A all expressed a willingness to attend some additional workshops on teaming; if in the words of one teacher, "...we're still doing it next year."

In summary, the participants from Group B described more in-depth professional development experiences on teaming in at least four broad categories: (1) team operations management, (2) curriculum and instruction, (3) teacher roles, and (4) middle school. The following sections will examine the participants' attitudes toward the use of teaming in these four areas.

Teaming as Goal Directed

One question posed in this study was, "What do you feel is the best way to manage team operations?" The teachers in Group B cited goal statements as being the most important factor in providing continuity and direction for their team throughout the year. A veteran teacher from Group B characterized her feelings in this way:

> For me, goals are the most important thing for keeping a team focused. I've been on teams that used goals and some that didn't. Probably the best way to describe it would be like driving across country on vacation without a road map. Everyone seems to spend a lot of time and energy debating where to turn, but in the end you always have the sense that your lost.

Another participant offered her thoughts on the use of goal statements:

> I see goal statements as an effective tool for unifying our individual efforts toward a common purpose.

The participants from Group B also saw the use of goals as a way of fostering cooperation among team members, while at the same time reducing the potential for future conflicts. In this way, goal statements were regarded as a kind of contract among members that set a mutually agreed upon course of action for the year. Group B's participants all reported satisfaction with the use of goal statements. The team leader from Group B shared observation:

> Using goal statements certainly makes my job as team leader much easier. It eliminates the potential for a lot of conflicts later on, because it establishes equal expectations and boundaries for everyone right up front.

> I think the best argument for using goal statements is that it forces you to come to a consensus early on about what it is your trying to accomplish as a team.

In contrast, the participants from Group A cited "administrative leadership" as being the most important factor for managing team operations. The participants from Group A did not use goal statements in managing team operations, but rather looked to leadership from the administration and team leader to guide teaming practice. The following section will examine attitudes toward teacher roles in greater detail.

Perceived Teacher Roles

One of the interview items was, "Describe the role of team leader." The participants from Group A described the job of team leader as being responsible for supervising team operations, organizing and running team meetings, and as being directly responsible to the principle for their team's activities. On a call back to one of the members of Group A, one teacher indicated that she felt uncomfortable at times voicing her concerns directly to the principal. She stated that by going directly to the principal, she felt like she was "...going over the team leader's head." Thus, the job of team leader was perceived at least in some general sense as having supervisory responsibilities by the participants from Group A.

The participants from Group B perceived the role of team leader differently. The only additional responsibilities conferred on the team leader

were meeting with the principal and organizing team meetings. All other responsibilities were shared equally among the members. The team leader from Group B characterized her job like this:

> I do not see myself as a supervisor. I mean, I've had teachers come up and ask me to say something to one of my team members because I'm quote, the team leader. I always refuse because my job is not to supervise my team, but really just to kind of organize what we're doing.

Another teacher shared this observation:

> I think one of the best ways to prevent the job of team leader from becoming supervisory is to rotate the team leader job every year.

Thus, participants from Group B characterized teaming as a cooperative endeavor where all members held equal status. The role of team leader was not perceived as having any oversight responsibilities and was given no elevated status within the team. Interestingly, this sense of equality and inclusion was extended to include new teachers as well. The members from Group B specifically reported during the interviews on their efforts to include new teachers in a meaningful way. One veteran teacher explained her expectations regarding young teachers:

> ...I mean our veteran teachers are going to naturally assume leadership roles to some extent, but its important to me that our young teachers are actively involved in the process.
>
> I believe sometimes as veteran teachers we underestimate the contribution young teachers can make, particularly sense they are usually more up to date on the latest educational innovations. They can bring a lot of idealism and energy to a team.

Pedagogic Implications

In an effort to abbreviate the languaging for this section, the term curriculum will be used to denote both content and instruction as a singular enterprise. The participants from Group A reported using team organization as a support mechanism for learning objectives most generally associated with traditional based instruction. An example of this was their use of block scheduling primarily as a tool for remediation. The teachers reported that they routinely scheduled students who were having difficulty with a class together in order to give them extra help. The teachers from Group A reported that these tutorial sessions were very helpful in improving their students grades.

While this use of block scheduling did produce positive results for their students, it does suggest an academic orientation to curricular organization. In that, the use of block scheduling was perceived as a way of facilitating the student's mastery of academic content. The participants from Group B utilized block scheduling on a less frequent basis. However, it's use was primarily reserved for the implementation of interdisciplinary units. It is in this area that the greatest differences between the two study groups were revealed. Group A reported that they completed one I.D. (interdisciplinary) unit per semester for a total of two during each school year. Group B responded that they completed one I.D. (interdisciplinary) unit per quarter for a total of four during each school year.

One of the questions posed in this study was, "What are the most important elements of a successful I.D. unit?" The participants from Group B described a successful I.D. unit as having four key components. They reported that a good I.D. unit should meet the following criteria: (1) generate curiosity, (2) have personal relevancy for the student, (3) provide useful knowledge, and (4) enable the student to construct personal meanings about their experiences. These guidelines provided a basis for Group B's construction and delivery of interdisciplinary units. The participants described the first, an most critical element in this way:

> A good I.D. unit presents the material in a way that sparks the students interest.
>
> I.D. units are really just like any other lesson. The most challenging part is getting the students motivated to learn.
>
> If the students don't get energized by the unit, then you may as well get out the worksheets.

A science teacher from group B underscored the importance of personal relevancy within the curriculum. He described this relevancy as being contingent upon the ability to present useful knowledge in a way that is directly relevant to the student's life:

> I took all of my kids out to take water samples from different creeks in the area. Then we analyzed the water samples in lab to determine what kinds of pollutants they contained. It really energized the kids and I think they learned quite a bit, because...you know, I think it made it much more relevant to them. I mean they play around these creeks everyday and now they know whats in them. Of course, they all wanted to write letters to the mayor...

Another teacher characterized the importance of journaling in this way:

> ...it makes it more meaningful and I think it stays with them longer. Journaling gives them an outlet to express their own feelings about what they are experiencing and reflect on what they've learned.

Perhaps one teacher summed up her team's view of curriculum best:

> Instilling a love of learning in the student is the ultimate goal of any good teacher. Thats why I think I.D. units are so useful. When done right a good I.D. unit really does make them enjoy learning.

Conversely, Group A reported using block scheduling primarily as a remedial tool for the academic disciplines. The two I.D. units completed each year by Group A were initiated in the parallel disciplines or multidisciplinary format, with each teacher contributing a component during their class period. The team leader from Group A characterized her feelings toward I.D. units in this way:

> I think there good as long as there is real academics in them. I think too often it becomes kind of a dog and pony show and I'm not sure if they really learn that much.

A science teacher from Group A shared his thoughts on the use of interdisciplinary curriculum:

> The reality is I've got to get these kids ready for advanced science classes in high school and ultimately for college. I think some of these people who tend to denigrate what we're doing ought to take a hard look at the demands placed on teachers today. I don't know...maybe this sounds kind of cynical, but I feel that...until the colleges change their entrance requirements; I feel its my responsibility to help prepare these kids to the best of my ability for those admission tests.

Middle School as Transitory

The teachers from Group B described the middle school as a transitional institution, wherein the team could be used to transition the students from a more constructivist approach early on, to a more abstracted academic curriculum in grade eight. Thus, the participants from Group B suggested that the team could be used differently at different grade levels within the middle school. These sixth grade teachers advocated the team as a means of creating qualitatively different learning environments than those created by the eighth grade teams. Group B indicated that they routinely did things differently than their counterparts in the next two grade levels. One teacher described the difference:

> The eighth grade teams are much more academic centered than we are. I suppose its because we have different jobs. We have to help them [students] adjust to middle school, while they have to get them ready [students] for high school.

Another teacher offered this observation:

> I think the best thing about teaming in middle schools, is that it gives teachers the flexibility to approach things differently at each grade level.

Thus, the teachers from Group B characterized middle school as transitory. The interdisciplinary team was seen as the primary mechanism for instituting a progressively more academic centered environment between the grades six through eight. Unlike the high school or even to a lesser extent the elementary school where the nature of curriculum and instruction remains

constant, middle school teachers advocate change:

> If I had to pick one word that describes middle school it would have to be change. The kids are changing, our curriculum changes from year to year, but I think its a good thing...

Conversely, as has been reported in the previous section the participants from Group A took a more discipline based approach, with respect to curriculum and instruction. Therefore, the transition from a constructivist toward a more discipline centered curriculum was not reported as being a factor in the development of curriculum. In that, the instructors from Group A by and large took an academic centered approach to pedagogy from the outset.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Introduction

Although more research needs to be conducted concerning the relationship between inservice and teacher attitudes toward teaming, this study did reveal differing attitudes between the two groups in a number of areas. Yet, for obvious reasons, the inability to completely control the inservice variable offers us at best an opportunity for a qualitative analysis of this relationship. With this in mind, the findings suggest that teachers who lacked inservice tended to project traditional attitudes toward middle level education onto the team model. Thus, attitudes toward a broad range of teaming issues including: team operations, instruction, curriculum, and teacher roles, appear to be influenced to some extent by the subject's participation in inservice. A brief discussion of each of these areas will conclude this chapter.

Conclusions

The two groups used for the study offered differing views regarding the management of team operations. The participants from Group B primarily used goal statements to manage team operations, while Group A described

administrative leadership as being the most important factor in managing team operations. This may suggest that teachers exposed to inservice with respect team operations are more likely to view teaming as a self-directed enterprise guided by goal statements. On a purely theoretical level, it may also suggest that teachers exposed to inservice are more likely to have a horizontal view of the interdisciplinary team as it relates to the school's governing apparatus.

In contrast, the responses from Group A revealed a more vertical perception of the school's governing structure. This is most evident with respect to their reliance on the administration to closely manage team operations within the building. Thus, the responses given by Group A suggest a belief that systems, or in this case team operations are best managed by directives coming down through a vertical governing hierarchy. Given the differences between the two study groups in this area, two possible inferences come to mind.

First, with respect to team operations, exposure to professional development may well engender a view of school governance characterized by a horizontal power structure. It also could be argued that exposure to inservice may foster teacher perceptions of the interdisciplinary team as a kind of semi-autonomous arrangement within the overall school organization.

Furthermore, the participants from Group B reported that the use of goal statements had additional implications for the interior politics associated with team operations. They reported that using goal statements helped to facilitate cooperation among team members, helped to reduce the potential for future

conflicts, and provided a focus for team operations. Thus, the differing attitudes offered by the participants have both theoretical and practical implications for team operations.

The study suggests a relationship between professional development and teacher attitudes toward teacher roles within the teaming structure. The participants who lacked inservice with respect to teacher roles tended to superimpose traditional views of competitive operational systems onto the teaming model. This was particularly evidenced by the attitudes expressed toward the role of team leader. The teachers from Group A described the team leader as having, at least to some extent supervisory responsibilities.

Conversely, the members of Group B described the role of team leader as primarily that of an organizer. This was underscored by the team leader from Group B who specifically noted during the interview, that she rejected any pressure from her colleagues to include any kind of informal supervisory oversight within her duties. These differences suggest that in the absence of inservice regarding the theoretical implications of cooperative systems, teachers may be more likely to view the role of team leader within a supervisory context.

It should be noted that the team leader from Group A did act as a liaison between her team and the principal, facilitating communication on important issues. Therefore, irrespective of the levels of inservice completed, the presence of team organization lends itself to a greater democratization of the

decision making apparatus within the school. Yet, in some important respects the team leader from Group A represented an additional bureaucratic layer in the perceived vertical structure of the school hierarchy. This was most clearly illustrated, by the team member's concern from Group A who was reluctant to speak to directly to the principal on some issues of importance, due to the fact she felt like she was "...going over the team leader's head." This statement reveals two important things relating to teaming practice: (1) a belief that a vertical hierarchy exists within the school, (2) and that the team leader's position within that hierarchy is above that of the respondent.

One could speculate that these differing perceptions regarding the structure and function of interdisciplinary teams, also influences the respondents attitudes toward their roles and that of their fellow team members. Meaning, that on a macro-level one cannot perceive a vertical hierarchy, without placing oneself within that perceived structure. It is also conceivable that these attitudes may well manifest themselves within the micro-politics associated with teams. The participants from Group B reported specifically on their affirmative efforts, to involve beginning teachers in a meaningful way in all aspects of the business conducted by the team.

This is not to imply that Group A devalued the contribution made by beginning teachers. This only suggests that Group B reported taking an affirmative approach in creating a cooperative environment based on their interpretation of the goals associated with the use of team organization. In the

broadest sense, this also reveals a horizontal orientation to team organization, wherein equality and inclusion are seen as indispensable elements for maximizing a systems use of human capital. The advocates of horizontal or cooperative systems essentially base their advocacy on the assumption that one plus one equals more than two, or that through cooperation and the sharing of ideas individuals are more creative and productive than they are individually.

This contrasts with traditional models based on vertical power structures, where competition is the primary mechanism utilized for productivity. Thus, the rationale underlying traditional systems is quite different, in that competition is valued for the purpose of providing individuals with the incentive to be more productive or creative than their colleagues. Therefore, one could argue that a dichotomous situation in fact exists, when interdisciplinary teams are formed within a (perceived) conventional system. At the very least, the interdisciplinary team is handicapped within a traditional system, by it's inability to fully exploit the totality of it's human capital.

Thus, if we base our advocacy of cooperative structures, or in this case interdisciplinary teams, on the notion that through cooperation we can create more responsive learning environments; it is self-defeating to initiate these reforms within the context of a traditional vertical paradigm. More specifically, the optimal use of human capital within the interdisciplinary team cannot be realized unless it is operating within a cooperative system. Teacher attitudes

expressed toward both managing team operations and teacher roles are most significant then, in revealing the underlying (or implied) attitudes toward the overall governing structure. Clearly, this suggests a cyclical reciprocity between beliefs, actions, and beliefs once again, each one continually influencing the other.

To recall a statement posed in the conceptual assumptions section of this thesis: We do not generally think about or respond to things because of what we know, by in large it is how we know that constructs our subjective worlds. The data presented in this study to a greater or even lesser degree confirms this assumption. The two groups interviewed for this study used interdisciplinary teaming differently in part, based on their theoretical orientation to teaming within the context of how they believed schools operate. Furthermore, we can assume with a relative degree of certainty, that because we live and work in a capitalist society that values competition, there exists a natural tendency to integrate new ideas into our preconceived, competition based cultural assumptions. Therein lies the paradox: On a theoretical level interdisciplinary teaming is incongruous with everything we have ever known or experienced with respect to the way systems operate.

Given this reality, the importance of comprehensive professional development programs for teamed or soon to be teamed teachers is clear, and is apparent on at least two levels. The first and most obvious of these deals specifically with the practical aspects of teaming practice. In the absence of

adequate inservice, teachers simply do not have a sufficient knowledge base of successful teaming practices, that can significantly improve their teaming capabilities. An example of this would be Group B's use of goal statements. Goal statements like many other things are tools that can facilitate the productive use of teams. Other examples of this not addressed in this study could include: effective use of meetings, various brainstorming techniques, interpersonal and intrapersonal skills. All of these critical areas are important for the effective use of team organization on a purely practical level.

The other and least obvious area deals with the theoretical implications of teaming, as it relates to school organization, or more specifically as it relates to school governance. As has been previously discussed in this chapter, the absence of inservice regarding the theoretical rationale underlying the use of interdisciplinary teaming can have a limiting effect on the realization of a true cooperative system of school governance. Group A's reliance on administrative leadership for guiding team operations, and the attitudes expressed regarding teacher roles, suggest that training in teaming theory is an important component of any comprehensive professional development program; If in fact, a truly cooperative system of school governance is to be realized.

Possibly the most important aspect of this study deals directly with the possible relationships between professional development programs and the pedagogy of teaming. The two study groups expressed divergent attitudes with respect to this province of interdisciplinary teaming. Again, as with school

governing related attitudes, the pedagogical differences between the study groups can be viewed on two interrelated levels. The first level involves the practical uses of teaming to implement curriculum. Thus, the most obvious difference between the two study groups were in the areas of block scheduling and the use of interdisciplinary curriculum.

The teachers from Group A used block scheduling as a remedial tool to help their students master a largely discipline based curriculum. Students who were having difficulty with a class were routinely grouped with a particular teacher during blocked out times, in order to provide them with one on one tutoring. This use of block scheduling, clearly suggests a discipline based orientation to both curriculum and instruction. Thus, Group A's members used interdisciplinary team organization primarily as a support system for the mastery of learning objectives most generally associated with traditional, or abstracted curricular themes. The term abstracted is used here to denote the practice of instructing almost exclusively through symbolism.

This contrasts markedly with a experiential curricular approach, where the student is asked to interact directly with his or her environment. In this case, real life experiences replace the symbolism associated with an abstracted curriculum. In that, students interact directly with the subject matter, rather than the symbols used to denote a kind of virtual subject matter. To give a simple example, an experiential approach to the study of botany may entail the study of plants within the natural ecosystems where they live. Conversely, an abstracted

approach to botany would more likely rely on books or computer programs, where the curriculum is encoded and learning occurs on a purely symbolic level. Group A's instructional use of block scheduling does suggest then, a more abstracted curricular orientation.

The second area of divergence between the two study groups, exists on a deeper more theoretical level. The teachers from Group B reported using block scheduling primarily as a vehicle for the implementation of interdisciplinary curriculum. It is in this area that the greatest pedagogical differences existed between the two study groups. Group A reported that they primarily used a parallel disciplines format for the creation of interdisciplinary curricular units. Additionally, the teachers from Group A reported that they offered assignments within their own classroom to contribute to the overall unit. Thus, the only qualitative difference between the interdisciplinary units and regular curriculum was the concerted timing between classes. During the interviews the participants from Group A emphasized their commitment to academic integrity when developing the units. Group A's team leader reported that she felt too many interdisciplinary units were more show than substance.

By contrast, the views expressed by Group B reveal very different attitudes toward the construction of interdisciplinary units. In the course of the interviews the members of Group B offered four criteria for the development of multidisciplinary or interdisciplinary curriculum. They believed the unit should (1) generate curiosity, (2) have personal relevancy for the student, (3) provide

useful knowledge, and (4) offer the student an opportunity to construct personal meanings about their experiences. Clearly, the two study groups approached curriculum differently. Group A initiated an academic centered curriculum, while Group B used interdisciplinary units to create a more child-centered approach to learning.

It is important to note that the term child-centered is not used here to suggest that Group B cared for their students anymore than their study counterparts. On the contrary, the teachers in Group A revealed a genuine commitment to their students during the course of these interviews. The term child-centered is used here simply to denote a focal point for curricular organization. Meaning, Group A felt they were best meeting the needs of their students (both present and future) by maintaining an academic curricular focus. The arguments they made in favor of this approach are compelling if not convincing.

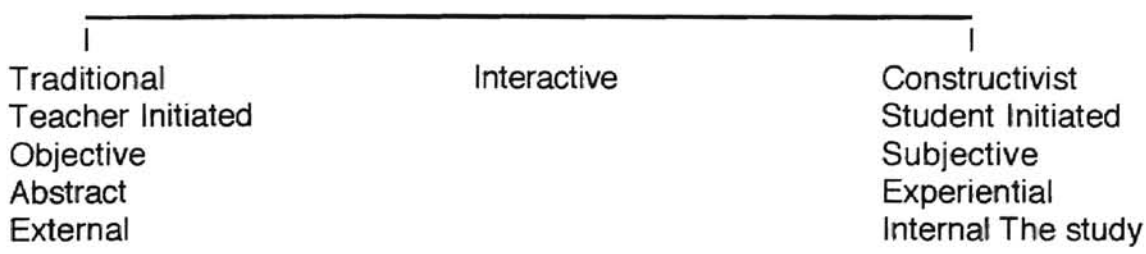
The teachers from Group B did report on having completed professional development workshops on both middle school and interdisciplinary curriculum. This background was congruous with respect to the way they reported initiating curriculum. Thus, the connection between inservice and the pedagogy of teaming cannot be understated. If we realize that virtually every teacher working today went to both traditionally organized primary schools and attended colleges that rely nearly exclusively on traditional instructional methods; it is easy to realize that teachers lacking inservice in middle school

curriculum will simply teach in the only way they have ever experienced. The argument here is that in the absence of inservice their will be a natural tendency toward abstracted, academic centered instructional methods, due largely to its prevalence at all levels of American education.

In summary, the two study groups pursued different curricular styles in part based on their attitudes toward the nature of pedagogy. For Group A, knowledge was seen as being "out there", and students were asked to internalize that knowledge on an entirely abstract level. Group B however, utilized a more contsructivist approach to curriculum. The teachers used more experiential learning techniques designed to allow the student to directly interact with his or her world. Thus, in some sense the student was asked to construct his or her own knowledge. Group B also revealed a concern for the student's feelings associated with the curriculum. Thus, the curriculum took on a more subjective or affective dimension. Some of the differences between the two study groups are summarized by the continuum below:

Figure 5.1

Continuum of Pedagogic Orientation



The study suggests that teachers provided with inservice may be more likely to view middle school as transitory. The teachers from Group B felt that the team structure could be used to transition the students toward a progressively more academic centered curriculum between the grades six through eight. While many would necessarily criticize this movement toward a more academic centered approach, these teachers argued that high schools and colleges are in fact academic institutions. Therefore, they believed that teaming could be used to help students transition from a more constructivist curriculum in the sixth grade, to a more abstracted curriculum in the eighth grade. This they believed would prepare them for the challenges they would face in high school and beyond.

It is also important at this point to look back at the Clarks' (1987) rationale for interdisciplinary teaming within the middle school. They argued that the middle school should help the child transition "from childhood to young adulthood and from elementary school to high school" (p.3). There is also considerable support for this within Piaget's cognitive stage theory. Piaget envisioned early adolescence as a time when students were transitioning from concrete to abstract thought.

Looking at both of these arguments, Group B's use of transitional curriculum appears to be well supported by sound theoretical arguments. Thus, the use of teaming to mirror these cognitive changes have both realistic and theoretical support. Group A on the other hand, primarily used teaming as a

support mechanism for an abstracted curriculum, therefore there was no real impetus to evoke any meaningful changes in teaming related curriculum between the grades six through eight.

Recommendations for Further Study

The relationship between teacher attitudes and inservice training is both multidimensional and highly subjective. There are obvious difficulties associated with examining this problem. The inability to provide complete control for the inservice variable, along with the myriad of other factors apt to effect teacher attitudes all add to the complexity of this problem. Yet, it is this problem that may hold out the best hope for improving the quality of education offered by middle level schools. Therefore, more research in this area may prove useful. Some possible recommendations for future study may include:

(a) conducting a similar study but using more participants from a number of districts.

(b) conducting a survey of teachers using an objective instrument to quantify participant responses in the area of both inservice and attitudes.

(c) combining elements of both (a) and (b) to establish a wide ranging and more detailed study.

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APPENDIX

INTERVIEW QUESTIONS

1. Describe how teaming works in your building.
2. Describe the role of team leader.
3. Describe the role of a team member.
4. What do you feel is the best way to manage team operations?
5. Describe a typical team meeting.
6. How does teaming effect the way you teach?
7. In what ways might team organization effect your curricular choices?
8. What are your feelings regarding the use of interdisciplinary curriculum?
9. Describe how you develop an I.D. unit.
10. What are the most important elements of a successful I.D. unit?
11. How does the use of teaming effect scheduling in your building?
12. In what ways do you feel teaming benefits your students?
13. In what ways do you feel teaming benefits you as a teacher?
14. Describe some teaming related inservice experiences you have had.
15. How do you feel these inservice experiences effect your use of teaming?
16. What are some positive aspects of teaming?
17. What are some negative aspects of teaming?
18. What advice might you give a staff about to begin teaming?

VITA

Paul Alan Phelan

Candidate for the Degree of

Master of Science

Thesis: THE RELATIONSHIP BETWEEN PROFESSIONAL DEVELOPMENT PROGRAMS AND TEACHER ATTITUDES TOWARD INTERDISCIPLINARY TEAMING

Major Field: Curriculum and Instruction

Biographical:

Personal Data: Born in Tulsa, Oklahoma, On August 19, 1965, the son of Paul and Shirley Phelan.

Education: Graduated from Memorial High School, Tulsa, Oklahoma in May 1983; received Bachelor of Science degree in Secondary Education with an emphasis in Social Studies from Oklahoma State University, Stillwater, Oklahoma in May 1992. Completed the requirements for the Master of Science degree with a major in Curriculum and Instruction at Oklahoma State University in July 1997.

Experience: Raised in Tulsa, Oklahoma; employed as Library Associate for the Tulsa City County Library System on a full-time and part-time basis for ten years; employed by Tulsa Public Schools as a middle school, social studies teacher for four years.

Professional Memberships: KAPPA DELTA PI, Golden Key National Honor Society.

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Date: 09-05-95 **IRB#:** ED-96-021

Proposal Title: THE RELATIONSHIP BETWEEN INSERVICE TRAINING PROGRAMS AND TEACHER ATTITUDES TOWARD INTERDISCIPLINARY TEAMING

Principal Investigator(s): John Steinbrink, Paul A. Phelan, Susan Breck

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

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Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval are as follows:

COMMENTS:

It's suggested that participants be given an information sheet which outlines the information presented in the oral soliciation. It would be useful for participants to have this informaton in writing in the event they have questions or comments after their participation is completed.

Signature:  Date: September 20, 1995

Chair of Institutional Review Board