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The Professional Beliefs and the Conditions That Support Integrated Curriculum in a New England Middle School

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THE PROFESSIONAL BELIEFS AND THE CONDITIONS THAT SUPPORT INTEGRATED CURRICULUM IN A NEW ENGLAND MIDDLE SCHOOL

A DISSERTATION

submitted by

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THE PROFESSIONAL BELIEFS AND THE CONDITIONS THAT SUPPORT INTEGRATED CURRICULUM IN A NEW ENGLAND MIDDDLE SCHOOL

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Lesley College, School of Education, 1999

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ABSTRACT

Research on the best practices at the middle school level suggests that early adolescent students need an educational environment that is unlike elementary or high school. Young people between the ages of 10 and 14 are experiencing rapid changes in their cognitive, social, emotional, and physical development. In order to meet these needs, middle school curriculum must provide opportunities for students to broaden their knowledge base, explore areas of interest, and acquire a sense of self as they seek to understand their place within the larger society. An effective way to reach such goals, at the middle level, is through the design and implementation of integrated curriculum.

The purpose of this investigation was to identify the professional beliefs of middle level educators who integrate the curriculum and the conditions that support the implementation of curriculum integration. Ten middle level teachers who represented two interdisciplinary teams participated in the study. One team

taught a group of approximately 100 seventh grade students and the other team was comprised of a combination of 100 seventh and eighth graders.

Naturalistic qualitative research methodology was used for data collection. Each participant was interviewed by the investigator, and individually responded to a written questionnaire. Ten hours of audio-taped interviews were collected and seven hours of videotaped team planning sessions were recorded and analyzed.

This study suggests that there are both extrinsic and intrinsic factors that drive the design and implementation of integrated curriculum at the middle school level. The data revealed that contrasting strengths and diversity in roles taken on by interdisciplinary team members maintained a balanced team effort when planning integrated instruction. Factors such as personal definition of integrated curriculum, knowledge of early adolescent development, and pedagogy were identified as intrinsic factors that influenced the design of integrated units, instructional methods, and instructional roles in the classroom.

Furthermore, extrinsic factors such as curriculum standards, school structures and support from team members and the administration have a direct impact on what and how teachers teach. Extrinsic factors are often so powerful that no matter how strong a teacher's professional beliefs about teaching and learning, extrinsic factors determine the direction of educational programs.

To my wonderful parents, Olive and Art Davis,
who never doubted my ability to
complete this work.

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Issues of anonymity prevent me from naming the teachers whose assistance made this research a reality. Thank you for finding the time in your busy schedules to answer my questions and to share your thoughts and insights about integrated curriculum.

The completion of this document would not have been possible without the support of my friends and family. I wish to thank my colleagues who took the time to listen, read, and react to my dissertation drafts. A special thank you to my children, Tamara and Mark, who never questioned my sanity over the past seven years and to Steve, whose patience during the final stages of writing this dissertation gave me the strength to finish.

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CHAPTER I

Introduction

Throughout the history of American education, two questions have always been asked. "What knowledge is worth knowing?" and "How are teachers going to convey that knowledge to students?" As public education enters into the 21st century, instruction can no longer be driven by workbooks and textbooks with an emphasis on separate, often disjointed subject matter. For most of us life is not lived in isolation nor are societal, personal and even work related problems solved applying knowledge from one discipline at a time. For example, even the simple act of grocery shopping requires math skills, reading comprehension as well as an understanding of nutrition. Many of life's problems and routines are solved by integrating knowledge gleaned from a number of the disciplines, therefore school programs and curriculum design must also reflect "active linkages between fields of knowledge" (Jacobs, 1989). Therefore, meaningful learning experiences that will prepare students for *their* world appear to require instruction that is integrated in ways that reflect today's world and which will prepare students for their future role as adults. In addition, educators are challenged to design curriculum and develop instructional strategies that will keep pace with the globalization of economics and trade, the growing numbers of students with diverse cultural and ethnic backgrounds in our schools, and the vast amounts of information available through the Internet and other technological sources.

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The middle level or middle school years appear to be the particular level of education where an emphasis on integrated learning is needed and innovative ideas are necessary. Early adolescents are experiencing a unique period in their lives. It is during this time that one will observe great diversity in student's socio-emotional, cognitive, physical, and moral development. Those who work with students during this time of pubescence need to have understanding and empathy for the rapid and varied changes affecting the lives of their middle school students.

As the Carnegie Task Force on Adolescent Development (1989) reminds us, "For many youth 10 to 15 years old, early adolescence offers the first opportunity to choose a path toward a productive and fulfilling adult life. For other students at this stage, it may represent their last best chance to avoid a diminished future" (p. 8). When a major purpose of middle level education is to make learning reflect life so that students see the value of what is being taught, integrating instruction across disciplines is a natural choice for curriculum design. An effective middle school curriculum invites young adolescents to learn in ways that encourages inquiry, provides in-depth study of a subject, and allows students to discover how concepts and ideas are connected within and among fields of knowledge.

Even though groups such as the Carnegie Task Force and national organizations such as the Association of Supervision and Curriculum Development support changes that reflect integrated instruction, middle school reform to date has been encumbered by numerous barriers. Opposition to the change process by school administrators, teachers, and members of the community often occurs when there is a lack of shared vision, a lack of

understanding of middle school philosophy from superintendents and school boards, and an inability for advocates of the change to be persistent as obstacles arise (Lipsitz, Mizell, Jackson, and Austin, 1997). Teachers' differing pedagogical beliefs and the demands of different course content add additional barriers to effective change and the implementation of innovation. When implementing integrated curriculum schools must be willing to examine how the school day is structured, how content is presented and how teachers plan instruction and work together.

Numerous research studies focused upon identifying the practices and outcomes of middle school education have been conducted over the past 25 years. The majority of these studies have focused on school organization (Doda, 1984), the developmental needs of early adolescents and their self-esteem (Lipsitz, 1984), the identification of essential middle school organization and curriculum design (Carnegie Council, 1989; Alexander and McEwin, 1989), the role of interdisciplinary teams (Epstein and Mac Iver, 1990; Dickinson and Erb, 1997; Arnold and Stevenson, 1998), and most recently, the effects of the school reform movement on the middle school (Lewis, 1993; Felner, Jackson, Kasak, Muhall, Brand, and Flowers, 1997). An area covered repeatedly over the years is the relationship between interdisciplinary teams and the implementation of integrated curriculum design (Beane, 1990; Brazee and Capelutti, 1995; Stevenson, 1998).

This interest in the connection between integrated curriculum and interdisciplinary teams can be seen when an entire issue of Phi Delta Kappan (March, 1997) features research findings on middle school reform and their impact on early adolescent learners. The middle schools which were examined

in the Phi Delta Kappan articles had been designed based on the principles set forth in Turning Points: Preparing American Youth for the 21st Century (1989). Key findings in these articles indicated that middle school reform must go beyond surface level organizational change. Educators who work with young adolescents must also pay attention to curricular design, instructional strategies and assessment tools that will enable middle level students to achieve high academic performances. (Lipsitz et al, 1997).

Since the mid-1980s research on middle level education has centered on the degree to which exemplary characteristics such as interdisciplinary teams and scheduled blocks-of-time have been implemented into middle schools. Felner, and his associates (1997) support research efforts that do more than "check off" practices that are developmentally responsive to early adolescents when identifying exemplary middle schools. Merely indicating which practices are being implemented is not enough to insure successful change. In order to fully realize the benefits of middle school reform, steps toward change must look at middle school organizational structures and curricular design holistically and not as separate issues (Felner et al, 1997). School structure and curriculum are not separate entities to be evaluated on their individual merits. Change efforts must look at how structural reform and curricular design are interrelated in order to create developmentally responsive curriculum for middle school students.

Given numerous articles and research reports written in support of reform at the middle school level and what has been characterized as developmentally responsive curriculum (Vars, 1993; Brazee & Capelluti, 1995; Beane, 1997) an area that has not received much attention is the interrelationship between the

professional beliefs of teachers in these middle schools and their use of innovative practices. If integrated learning is advantageous to early adolescents' future academic endeavors, then it is important to understand the role that teachers' beliefs about integrated curriculum have on the extend to which integration is used.

Statement of the Problem

The problem this descriptive study examined was the identification of factors, as related to the teachers in this study, which contribute to the design and implementation of integrated curriculum at the middle school level. This study selected only middle level teachers who gravitated toward or found themselves involved in integrated curriculum. The focus of this research was to study the professional beliefs of middle level educators who engaged in curriculum integration and the impact these factors had on instruction. The objective of this study was to look at middle school teachers who integrated the curriculum around themes and issues within a collaborative teaching setting. The questions that guided this study were, “What are the professional beliefs of middle level educators who integrate the curriculum?" and, "What are the conditions that support the implementation of integrated curriculum developed by these educators?

The first question was developed from the study of research which reported a wide range of definitions related to integrated curriculum. Question one determined how participants defined and perceived integrated curriculum for their students. The second question asked was what factors or conditions support the implementation of integrated curriculum.

Importance of the Study

The problem this descriptive study examined is important for a number of reasons. First, by identifying the professional beliefs of middle school educators who integrate the curriculum, teacher education programs can develop courses that model integrated teaching methods that require both critical thinking and collaborative problem solving skills. Second, it is hoped that this study will contribute to the current literature related to effective teaching practices for the middle school level. Third, this study attempts to provide school-based data that demonstrates that the research conducted by prominent middle school educators (Stevenson, 1992; Irvin, 1992; Beane, 1990; Garvin, 1995; and Dickinson and Erb,1997) and the theory about middle school education has merit in real middle school settings.

There is relatively little information about the connection between teachers' own perceptions of curriculum integration and how integrated learning is actually implemented in middle school classrooms. In this study, the researcher documented a range of interpretations related to curriculum integration, as expressed by the participants in their interviews. Information also was recorded that identified factors that either supported or inhibited the implementation of integrated curriculum in this particular site study school.

Purpose of the Study

The purposes of this dissertation were twofold: (1) to attempt to identify the professional beliefs of middle level educators who were engaged in integrated curriculum and (2) to seek to clarify the conditions that support the implementation of integrated curriculum as perceived by the teachers engaged

in its implementation. The intent of this study was to determine whether there were common beliefs shared by the participants and to then compare those beliefs to the philosophical underpinnings of teacher education programs in an effort to determine if college courses are effectively preparing teachers for middle level teaching.

Limitations of the Study

This study was restricted in the following ways:

1. This study was conducted at a single public middle school that included two teams of teachers who integrated curriculum around themes.
2. The geographical setting was a single rural area of New England.
3. Arrangements to videotape team planning sessions were made in advance of each meeting. Therefore, the content of the sessions may not be totally representative of usual daily team meetings.
4. Conclusions made on the basis of this study are limited to those perceptions or beliefs represented by the teachers in this school who participated in this study.

Definition of Terms

- Curriculum: Curriculum is the formal and informal content and process under the auspices of [a] school which enables learners to gain knowledge and understanding, develop skills, and alter attitudes, appreciations and values (Doll, 1996).
- Curriculum Integration: Realizing it is difficult to find agreement among

experts and that there is no single definition of curriculum integration, Brazee and Capelluti's (1995) definition has been adopted for this study. They describe middle school curriculum along a continuum from separate subject instruction to integrated learning that dissolves the discipline boundaries. This continuum is represented by:

- conventional: curriculum in which there is a strict interpretation of the disciplines from a separate subject approach with no special effort to connect the subjects.
- multidisciplinary/interdisciplinary: in which each discipline maintains its own identity as several teachers from the same team coordinate instruction around the various aspects of a theme or topic such as the environment or the Civil War. Each team member teaches to the theme from the perspective of their own discipline. Such thematic or coordinated units are often "added" onto the existing curriculum.
- integrated: curriculum in which discipline boundaries are dissolved as students study themes that connect content across subject lines. It is the theme or topic that determines which disciplines are incorporated into the unit of study. In order for students to study the theme, they must use concepts, skills, and content from different discipline areas. To accomplish this, scheduling changes are made from the single subject periods to large blocks of time reserved for students to study a theme or topic

thoroughly. Integration at this level is thought to be "critical or central, not merely tangential to learning".

- Middle Level Students: Students at the middle level are in grades five, six, seven, and eight and range in ages between 10 and 14.
- Interdisciplinary Team: An interdisciplinary team has three, four, or five teachers who share the same group of middle level students, plan curricular programs as a team, have common planning times, and are housed in close proximity to each other.
- Scheduled Block-of-time: In this study, scheduled block-of-time refers to a continuous amount of time (150 to 200 minutes) for instruction in English, science, social studies and math. Within these scheduled blocks-of-time, interdisciplinary teams have flexibility in how and when lesson are taught.
- Innovation: For this study, an innovation is a planned educational program or instructional strategy that is new to a school or group of educators such as curriculum integration.
- Professional Beliefs: In this study, professional beliefs are the principles or tenets held by educators related to curriculum and instruction.
- Characteristic: A characteristic is a feature or attribute that distinguishes one individual from another.

Summary and Overview of Remaining Chapters

This chapter presents an introduction to this descriptive study which documented the professional beliefs of middle school educators who integrate the curriculum and provided information about the support they

believed they needed to implement integrated learning. The remaining chapters include a review of literature, methodology used for the study, data collection and analysis, and a discussion and summary of the study.

CHAPTER II

RELATED RESEARCH AND REVIEW OF LITERATURE

The purpose of this study was to determine if there were a set of professional beliefs shared by middle level educators who carry out curriculum integration and to identify conditions that support implementation of curriculum integration in a site study school. The review of literature is organized in three categories which relate most closely to the study. The first section presents a historical look at the development and purpose of middle school education. The second section reports studies that have identified the characteristics of integrated curriculum and its benefits for middle level students. Lastly, the third section identifies the factors that impact schools' ability to implement curriculum change.

Development and Purpose of Middle School

For nearly a century, educators have debated how to best meet the developmental needs of early adolescent students. Even during the late 1800s it was recognized that emerging adolescents were unique in their development from both the elementary and secondary student. The following section looks at the events that led to the formation of the junior high school in the early part of the 20th century and the emergence of the middle school in the 1960s.

The Junior High School

During the late 1880s the United States saw a sharp rise in school enrollments. This increase was caused by a number of factors. Large populations of immigrants and people from rural agricultural areas were flocking to urban centers to find a better life and to capitalize on the new industrial age. Changes in child labor laws and compulsory school attendance regulations also added to the number of children attending school.

The influx of millions of immigrants to American soil and the dawning of the machine age called for changes in curriculum goals. As the United States experienced a major change from a rural agricultural society to a powerful, industrial, urban nation, the teaching of democratic ideals and nationalism no longer seemed viable as the major goals for curriculum development. Schools, especially those in the Northern United States, helped "integrate immigrants into the U. S. society, prepared them for civic duty, and trained them for work in industry" (Reed and Bergemann, 1992, p. 154). American education was now focusing on the utilitarian functions of the curriculum with a strong emphasis on vocational education, reading, writing and mathematics.

As schools continued to teach the basic skills in response to a growing industrial society, institutions of higher education began to examine the effectiveness of secondary schools in preparing students for colleges and universities. During this period, the concept of a school “in the middle” began to take shape.

By 1888, there was a movement to examine secondary education in response to the low numbers of entering freshman in colleges and universities. Charles W. Eliot, president of Harvard University at the time, used his influence

to raise questions about the effectiveness of elementary and secondary school programs for college preparation. In an effort to improve public school programs prior to college admission, the Committee of Ten on Secondary School Studies was formed in 1892. The Committee's mission was to standardize high school curricula and to bridge elementary and secondary styles of education that would promote more qualified students for college or university acceptance. At that time, elementary education required eight years of schooling while secondary school took an additional four years to complete (Hessong and Weeks, 1991). The Committee of Ten recommended that secondary education begin two years earlier in order to better prepare students for their college or university education. In order to accomplish this change, a 6-3-3 configuration was proposed to replace the 8-4 arrangement. Elementary schooling would take six years to complete and secondary education would require an additional six years.

Fifteen years after the Committee's recommendations to change the elementary and secondary configuration, it was reported that only forty percent of the elementary school children in the United States went on to complete their secondary education. Research conducted between 1907 and 1911 indicated that large numbers of students were dropping out of school prior to the ninth grade, and that the highest dropout rates were at the seventh and eighth grade levels (Conant, 1960; Lounsbury, 1992). These alarming figures and an increased understanding pertaining to the developmental needs of the early adolescent provided junior high school administrators with the impetus to attempt to reorganize the junior high curricula in order to keep more young people in school beyond the seventh and eighth grades (Van Til, Vars &

Lounsbury, 1961). This growing focus on early adolescent students gave birth to a more widespread junior high school movement in the early 1900s. The first "Junior High School" opened in Columbus, Ohio in September of 1909 and in January of 1910 Berkeley, California opened what was called an "Introductory High School" (Nickerson, 1966).

Further support for a separate educational experience for emerging adolescents came form the work of G. Stanley Hall (in Irvin, 1997). In 1905, Hall, a developmental psychologists noted differences in the educational needs of young adolescents from older students. Hall's premise was that curriculum should not be developed around the interests of adults, but rather around the developmental interests of children and adolescents. As a result of his research, Hall saw the merits of a new type of school that addressed the unique needs of this age group.

As the junior high school began to establish an identity of its own, its function was clearly more child-centered than college preparatory. The 1918 Report of the Commission on the Reorganization on Secondary Education supported a separate organizational structure for the junior high school. It is interesting to note that three points were made in the report that resembled today's middle school philosophy. The document stated that the emphasis of the junior high school experience was to help students explore their own aptitudes, to advocate a gradual transition to departmentalized instruction, and to create a social organization that fosters personal responsibility for the group (Lounsbury,1992).

In keeping with the goals of the Progressive Education Movement prevalent during the 1920s, the junior high curriculum was designed to

emphasize the integration of learning experiences, the exploration of interests and abilities, and the beginnings of guidance and counseling programs that were to continue through the high school years (Tanner & Tanner 1975). Progressive educators were concerned with how the transmission and use of knowledge occurred in regards to the child's cognitive, affective, and psychomotor development. These educators recognized that junior high school aged youngsters needed educational experiences that complemented the significant and dramatic developmental changes that occur during the time of puberty. However, the original tenets of the junior high movement would fade with the end of World War I.

Rising birth rates following the end of World War I caused mounting school enrollments and overcrowded schools. As a result, the number of junior high schools actually increased significantly. Often junior high schools were established essentially to accommodate growing populations of students and were created by moving grades seven, eight, and nine to an old high school building and constructing a new facility for grades ten, eleven, and twelve. The unique developmental characteristics of the early adolescent student in grades seven, eight and nine, were often a secondary consideration for establishing a junior high school in a district. It appears that the problems experienced by the junior high school movement, over the next forty years was not due to its intent, but to its implementation.

During the 1930s and 1940s the roots of essentialism began as a reaction to progressive education. Essentialists believed that an educated person needed a critical core of information and skill in order to live well (Ryan & Cooper, 1998). Shortly after World War II, progressive education declined

and the essentialists had a stronger influence on curriculum. Deficiencies in education were believed to be the result of a lack of structure in the progressive approach. Dewey's opposition to authoritarian teaching which he believed blocked genuine inquiry was seen as soft and lacking in the discipline that students needed.

By the late 1940s to the early 1950s, the progressive ideology that advocated for the child's interests and needs as the focal point of instruction and curriculum, was being met with even more opposition. The progressive view that education exists to solve society's problems lost its appeal with advancing technical and scientific knowledge during this period and after the discovery of the atomic bomb (Reed and Bergmann, 1995). Education for the "good society" became less attractive and deficiencies in schools were being blamed on progressive approaches that lacked academic rigor. Thus began the movement toward more subject-centered curricula.

During this same period, there was growing criticism of junior high schools that were unable to maintain a separate identity from either the elementary or the high school. While many junior high schools continued to provide learning experiences that were developmentally appropriate for this age group, others were operating like "mini" high schools and were not fulfilling the original intended functions that addressed the needs of early adolescent students. There was also concern that some junior high schools did not have specially trained teachers since many teachers were hired "with the promise that if they took this job they would have the first appropriate vacancy in the senior high (Lounsbury, 1992). Junior high schools were also plagued with school buildings that were often "left-overs" from the high school and in need of

repair. More importantly, there was a growing push from high schools for more academic rigor at the junior high level to prepare students for the higher level work they would meet in the high school.

The launching of the Russian Sputnik in 1957 perhaps was the most influential factor regarding what and how content should be taught in schools. Fueled by concerns over the ability of the United States to compete with other world powers, curriculum reform during the 1950s and 1960s turned its focus to intellectual development and the social and psychological needs of students became secondary concerns. The emphasis on national survival in the nuclear age made demands on America's schools to produce more scientists and mathematicians (Gwynn and Chase, 1969). Ability grouping practices increased and testing predominated in an effort to identify and to motivate academically able students.

Schools "In the Middle"

In response to Sputnik, the nation became critical of what and how content was being taught in our schools. During the 1950s and 1960s it was believed that academic excellence meant academic mastery especially in mathematics and the science. As a result, many junior high schools altered their curriculum to match that of the senior high. Ability grouping or tracking in all academic subjects replaced the exploratory and enrichment functions that set the junior high curriculum apart from both the elementary or high school programs developed in the early 1900s.

By the early 1960s, educators were reexamining the original tenets of the junior high school movement that recognized the need to provide educational

experiences for early adolescent students that were more appropriate for their changing and developing interests. In 1961, the Association for Supervision and Curriculum Development Commission on Secondary Curriculum identified five areas that were necessary for an effective junior high school program. According to this 1961 report a junior high school education should foster in its students:

1. A sense of positive self-worth and an enhanced understanding of others
2. A genuine interest, strengthened competence in several areas of learning, and acquaintance with the world of work
3. Mastery of basic skills of inquiry and study so that independent work may be pursued more adequately
4. An increased capacity to discipline themselves to work, study and play constructively and with satisfaction to themselves and others
5. A moral and ethical sense which values the goals and processes recommendations of a free society (Grambs, Noyce, Patterson, and Robertson, p. 3).

Other criteria suggested in this report included integrated block-of-time instruction that combined subjects, teacher preparation for junior high school teaching, and moderate school size. Scheduled blocks-of-time utilized longer periods of instructional time to combine two or more subjects. The idea of flexible scheduling and integrated instruction was met with controversy since the focus and benefits to such instruction for early adolescent students was not clearly conveyed to the community or to the teachers. It was difficult for the public to understand how two subjects such as English and social studies could

be combined and the integrity of each subject maintained. Many teachers felt that they had specialization in specific subjects and were generally accredited for secondary teaching.

Besides being knowledgeable in subject matter, the report pointed out that junior high school teachers also needed a clear understanding of the developmental needs of their students and enjoy working with early adolescents. The report suggested that junior high schools with a student population larger than 500 students provide smaller sub-units or "schools within the school". When a sense of "smallness" was provided, students were better able to feel that they belong to a group and find a respected place for themselves.

Reports in the mid-to-late 1960s, indicated that the recommendations made for junior high schools by the ASCD Commission on Secondary Curriculum were not being implemented. A growing dissatisfaction with junior high school curriculum combined with research from developmental psychologists on early adolescents led to a new educational concept. The emergence of the middle school or the school “in the middle” included grades 5-8 or grades 6-8 (Lounsbury, 1992).

Researchers and middle school educators proposed that a 5-8 or 6-8 configuration was better suited for the students in early adolescence. Studies indicated that children were reaching pubescence earlier, and many ninth grade students were more like their high school peers rather than like seventh and eighth graders. The data also indicated that fifth and sixth grade students were now more like the eighth graders found in junior high schools than like the children found in the intermediate grades in an elementary school. Among

other factors, improved diet and health care had accelerated the physical maturation of children, particularly between the ages of 11 and 14 (Romano and Georgiady, 1997).

Eichhorn (1966), one of the founders of today's middle schools, provided further evidence to support special considerations in schools to meet the developmental needs of early adolescents. In his pioneer work The Middle School (1966) Eichhorn included a letter written on August 25, 1959 from Supervising Principal Carl R. Streams to the Pennsylvania Department of Instruction. The letter was a request to form a middle school with grades 6-8 and the reasons for such a change. The letter reads in part:

> 1. From the physical and psychological point of view it is a more natural grouping. There appears to be less of a differential in maturity between the sixth and eighth grade than between the seventh and the ninth grade.
> 2. The social patterns are more nearly the same in grades 6, 7, and 8 than in the conventional pattern of grades 7, 8, and 9. The social maturity of the ninth grade students more nearly parallels that of the older students. A better social program could be carried on without the ninth grade student (p. 2).

Another factor that contributed to the growth of middle schools during the 1960s was the desegregation movement. Administrators saw that by reorganizing to the middle school model they could actually increase their numbers of children in desegregated schools within a district. Ninth grade students could be moved to the high school, and fifth and sixth graders who had

often been in segregated elementary schools could be moved to middle schools (George, Stevenson, Thomason, and Beane, 1992).

Shifting demographic patterns across the country also contributed to the rise in the number of middle schools during the mid-to-late 1960s. A growing number of children were entering elementary schools while high school enrollments were declining. By instituting middle schools, overcrowding could be alleviated at the elementary level and the high schools could increase their enrollments as ninth graders entered the high school and they could avert laying-off discipline-based teachers as well (George and Alexander, 1993).

In support of middle school education, the National Middle School Association (NMSA) was founded in 1963. Today, this association serves as a major professional organization and advocate for a separate educational experience for early adolescents (Lounsbury, 1992). The National Middle School Association advocates for developmentally responsive middle level schools to provide (NMSA, 1995):

- Curriculum that is challenging, integrative, and exploratory
- Varied teaching and learning approaches
- Assessment and evaluation that promote learning
- Flexible organizational structures
- Programs and policies that foster health, wellness, and safety
- Comprehensive guidance and support services (p. 11)

Over the past three decades the world of the emerging adolescent has been scrutinized and examined intensively. Growth and developmental needs are unique to the early adolescent as 10 to 14 year olds represent the widest range of physical growth, mental development and social experiences possible.

Beane (1990) and Stevenson (1998) remind us that these vast differences in cognitive, physical, and social and emotional growth require a curriculum that can provide opportunities for students to explore topics of their interest and be provided with integrated activities that show them how knowledge fits together. These indicators point to the need for middle level students to be in a school entity separate from either the elementary school or the high school (George and Shewey, 1994; McEwin, Dickinson and Jenkins, 1996; Irvin, 1997).

In order to continue to move forward in middle level education, it is critical that educators reflect and learn from its historical past. History has told us that middle school students need an organizational structure that allows for small communities within the larger school environment, an opportunity to form meaningful relationships with caring adults, and a curriculum that will meet the developmental needs of their age group. Middle schools that have taken advantage of these historical insights have implemented interdisciplinary teams, scheduled larger and more flexible blocks-of-time for instruction, and have designed a curriculum that shows the connections between and among the disciplines.

Even though history tells us what the best practices are for middle level students, we still are asking the same questions about what and how content should be taught in middle schools. We know that an integrated approach to learning is appropriate for the social and cognitive development of the early adolescent and we also know that certain organizational structures must be in place in order for integrated instruction to happen.

Many middle school teachers have an intrinsic knowledge about what young adolescent students need to be successful in school. They know that

school experiences must meet the varied developmental needs of their students and that learning should be authentic and meaningful. It appears that the educational community and many middle level teachers understand and accept the theory that supports integrated curriculum and other middle school practices, but they have not always be able to put the theory they subscribe to into practice. The literature suggests that extrinsic factors such as school organization, the administration, and the content of the curriculum have a direct impact on school programs including those at the middle level. Until the schools, the parents, and the community accept that change may be necessary to provide a developmentally appropriate middle level education for early adolescents, we will continue to ask the same questions and wonder if we have widespread and demonstrable answers.

Curriculum for the Middle School

The Carnegie Task Force on Adolescent Development (1989) noted the significant changes that middle level students face in their cognitive, emotional, social and physical development. Young adolescent students need “caring relationships with adults, guidance in facing sometimes overwhelming biological and psychological changes, the security of belonging to constructive peer groups, and the perceptions of future opportunity" (p. 20). The challenge for middle level educators is to find ways to excite their students about learning and help them discover how classroom life translates into their world outside of school. Integrated curriculum is one way middle schools can address students' interests and concerns (Carnegie Task Force on Adolescent Development, 1989; Beane, 1990; Vars, 1993; This We Believe, 1995; Dickinson & Erb, 1997;

Arnold & Stevenson, 1998). The next section will look more specifically at integrated curriculum and how its interdisciplinary team and school organizational structures influence the implementation of integrated curriculum in the middle school.

The roots of integrated curriculum can be found in the philosophy of John Dewey and the Progressive Education Movement. Supporters of progressive education, believed that the content of curriculum ought to be derived from students' interests rather than from the academic disciplines. Progressive Education taught students to think rationally in order to become intelligent, contributing members of society by performing tasks and learning skills that demonstrated the relationship between the school and the larger life of the community (Dewey, 1915). This meant the emphasis was placed on the learner to be an active participant for whom teachers provided real-life experiences as well as many opportunities for solving problems or to learn by doing.

Dewey (1902) believed that the fundamental factors in the educational process were the learner, the society, and the organized subject matter. For the child, these factors were experienced holistically which led to the theory of integration:

> Again, the child's life is an integral, a total one. He passes quickly and readily from one topic to another, as from one spot to another, but is not conscious of transition or break. There is no conscious isolation, hardly conscious distinction. The things that occupy him are held together by the unity of the personal and social interests which his life carries along (p. 5).

Kilpatrick, a student and follower of Dewey's progressive philosophy suggested that the process of integration facilitated the child's interest and experiences through what he referred to as the "activity curriculum". Children were to draw their own conclusions about problems through observations and hands-on experimentation (Kilpatrick, 1934). Kilpatrick (1929) believed that curriculum should reflect connections to daily life rather than formal institutional style education. He explained his views in the following:

> The separation of school education and its processes from immediate life and its educational processes has led only too easily to institutionalizing the school in the bad sense of that term (p. 55).

Also popular during this period was the "project approach" to instruction which was a problematic task that was carried to completion in its "natural setting" through reasoning rather than merely memorizing information (Stevenson, 1921). The distinct contribution of this project approach was the concept of a natural setting that required children to solve a problem in the classroom the same way it would be solved in a real life situation. Those who supported the project approach believed that subject-matter should not be prepared for the mind as separate factors. Stockton (1920) explained how subjects were addressed through this approach to learning:

> "Subjects" are taught, not so much as separate factors, but as inter-related (correlated) elements of the social life involved.
>
> The whole content of the curriculum is unified and made practical (useful), not on an economic basis, but on this broad, cultural basis which interprets modern practical life, and makes the school part and

parcel of it (p. 67).

Further support for learning that showed connections among content areas occurred during the 1930s. Some educators felt that that the high school curriculum was too monolithic and rigid and should be loosened. The subsequent Eight Year Study (Aikin, 1942) involved 30 secondary schools that combined subjects such as general science and social studies to determine if the integration of content helped or deterred college bound students. Graduates of the experimental schools demonstrated more success in college academics and social measures than those from subject-centered programs. Unfortunately, the promising results of this study that supported integrated learning did not attract educational leaders and the pressing issues of World War II obscured the results.

The middle school movement in the 1960s reestablished the emphasis on integrated learning as advocated by the original junior high school. Alexander (1969) identified three major components necessary for an effective middle school curriculum. These components were organized in the areas of organized knowledge, skills, and personal development.

Beane (1990) points out that curriculum for early adolescent students should be a general education program. Such a program can be established when the curriculum addresses the intersection between the personal and social concerns of middle level students. Skills such as problem solving, reflective thinking, and valuing can be addressed through themes that explore social structures, transitions, and interdependence among others. Meaningful education is based on activities that are both concrete and complex that engage students minds, hearts, and emotions (Erickson, 1995).

Integrated studies also show students the application of knowledge to real life experiences. Concepts that relate to the context of human experience and cut across disciplines lead to higher level thinking as students grapple with real issues and problems (Carnegie Council on Adolescent Development, 1989; Drake, 1993; Erickson, 1995; Ellis and Stuen, 1998). Issues such as violence in schools, poverty, or the war on drugs have application to real life situations and bring focus and depth to the study.

In addition to connecting learning to real life, it is important to consider how people process information. In order for learning to be meaningful, students must perceive relationships and patterns to make sense of the information. Caine and Caine's (1994) research on brain-based learning distinguishes between two types of knowledge, surface and procedural. Surface knowledge is described as content that is devoid of significance to the learner and concentrates on facts, procedures, and behaviors acquired through memorization. Natural knowledge or perceptual knowledge is, "what people use to order their grasp of the world in which they live" In many schools, students surface knowledge determines their success. What students need is a balance between surface and natural knowledge in order to master the mechanics of a discipline and relate that knowledge at a level of personal understanding. The brain searches for patterns and interconnections as its way of making meaning, therefore integrated instruction is more compatible with the way the brain works (Caine and Caine, 1994).

In order to be contributing members to society in the new millennium, young adolescent students need more than the basic skills. These middle level students need to think critically and solve problems in creative and collaborative

ways. Students today must be able to understand concepts, interpret and apply these concepts to other disciplines, and analyze information and solve problems in order to be prepared for life and work.

Education and training for the workplace of the 21st century is radically different than when schools were preparing students to work in the factories on isolated tasks. The world we live in today is competitive and complex. In order for America to remain a competitive leader in the global community, our educational system must provide students with the necessary skills and knowledge to meet the complex challenges facing them in the future. Schools must prepare students to be proficient in technology skills, have the ability to work cooperatively with groups of people and to have the strategies for knowing how to solve problems in creative ways (SCANS, 1991).

As more businesses emphasize the need for self-directed problem solvers and collaborative decision makers, students need to develop personal qualities such as sociability, responsibility, integrity, self-management, and honesty. It is clear that the working world wants students who can think for themselves and work as team members. In order to be an effective citizen in today's world, students must be able to solve and evaluate multidimensional problems and alternatives and manage ever more demanding social systems (SCANS, 1991; Darling-Hammond, 1993; Eastin, 1999).

The real world is not organized by disciplines, therefore the qualities and skills for success in the world of work can be addressed through integrated curriculum that will prepare students for their lives as adults. In order for students to make the connection that situations and problems cut across disciplines, students must be given opportunities to deal with life-relevant

questions, problems and issues (Erickson, 1995). Integrated curriculum helps students connect content to the real world beyond school.

Integrated Curriculum Defined

There are many curriculum design options available to educator's today. In addition there are many variations of each model or design as well as overlap and lack of agreement on terms and definitions used. Recognized advocates of the integrated curriculum movement (Jacobs, 1989; Beane, 1990; Stevenson and Carr, 1993; Vars, 1993; and Brazee and Capelluti, 1995) explain integrated curriculum in different ways. In fact, terms such as multidisciplinary, interdisciplinary and integrated instruction are often used interchangeably. However, most curriculum specialists agree that curriculum design options fall along a continuum and can be categorized from single discipline instruction at one end to integrated learning at the other end.

There appears to be little disagreement among educators that single discipline instruction or content presented in isolation tend to separate content areas and give students the impression that each discipline is discrete. However, different interpretations about other curriculum options begin to emerge as one moves along the continuum beginning, with the multidisciplinary option.

Curriculum specialists Brazee and Capelluti (1995) combine multidisciplinary and interdisciplinary curriculum as an approach in which teachers from the same team teach content related to a central theme or topic, but in their own separate subject classrooms. Stevenson and Carr (1993) explain multidisciplinary curriculum as a focus on a topic taught in one

discipline concurrently with compatible subject matter in another discipline where there is no deliberate attempt to integrate the two disciplines. For example, the English and social studies teachers decide to read The Summer of My German Soldier in English class at the same time the social studies class is studying World War II. If students find connections between the novel and their history study, they have often discovered these on their own as the teachers have not made a conscious effort to integrate the two. Stevenson and Carr (1993) describe this type of curriculum instruction as teachers "working alone together."

In contrast, Jacobs (1989) explains multidisciplinary curriculum as compatible or “complementary”. There is a conscious effort to bring related themes within two disciplines together to form a unit or course of study. An example might be a course in “Ethics in Science”. Jacobs (1989) explains interdisciplinary design as units or courses of study that deliberately use a full array of discipline-based perspectives which often include the core subjects as well and the arts and physical education.

Beane (1997) uses the term multidisciplinary to describe a “multi-subject” approach. Even though units are planned around a theme, Beane emphasizes the mastery of content and skills from the subjects involved” (p. 10). According to Beane (1990; 1997), an integrated curriculum teaches "to" a theme such as “justice” or “wellness” by dissolving the discipline boundaries. Therefore, in his model of curriculum design, the primary focus of planning for integrated curriculum is identifying a theme and then expanding outward to identify the ideas and concepts related to that theme rather than make the theme fit the different disciplines. Stevenson and Carr (1993) also believe that the

integration of traditional content or subject matter with students' interests about themselves and the world would make student interactions worthwhile and of quality.

Brazee and Capelluti (1995) explain integration as “blurring lines between subjects”. They emphasize the critical content and skills within core subjects such as math, science, social studies, and English being studied within the context of a thematic unit. For Brazee and Capelluti (1995) such integrated curriculum might be the study of a local river as it relates to the geography of the area, studying historical events connected to the river, and investigating the role of industry and the pollution of rivers. They contend that such integrated learning requires students to take the skills and concepts learned in various subjects and to synthesize that knowledge as it relates to a particular theme or topic.

The National Middle School Association (1995) supports the work of Beane (1990), Brazee and Capelluti (1997) and Stevenson and Carr (1993) in its definition of integration presented in a recent position paper.

> Curriculum is integrative when it helps students make sense out of their life experiences. This requires curriculum that is itself coherent, that helps students connect school experiences to their daily lives outside the school, and that encourages them to reflect on the totality of their experiences. (p. 22).

It also supports the work of Beane (1990), Vars (1997), and Stevenson (1998) who strongly argue that middle level students become invested in their learning when the curriculum addresses both their social and personal concerns.

Arnold (1993) identified five interrelated principles that empower the young adolescent to engage in positive learning experiences that relate to their own lives.

Principle One:

- Respect the abilities and potential of your students.
- Choose integrated themes that reflect students own experiences and build upon their personal and social concerns.

Principle Two:

- Provide instruction the encourages students to question challenge, apply, and value their own ideas as well as those of others.
- Provide opportunities for students to assume control over their own learning by exercising initiative and responsibility.

Principle Three:

- Focus on students sense of social responsibility.
- Provide opportunities for decision-making that involves in school and community projects and connects students with the world at large.

Principle Four:

- Encourage students to contribute to the well being of others and to feel needed themselves.
- Provide opportunities for middle school students to engage in authentic learning within the school and the community.
- Authentic learning such as service learning projects help students see the connections between what is learned in school and how that knowledge is applied to real-life situations and problems (Andrus,

1995).

Principle Five:

- Provide activities that promote positive self-esteem.
- Empower students to gain control over their own community and individual lives.

In order to help students realize the relationships between and among content areas, educators must often shift from teacher-directed instructional methods to providing their early adolescent students with opportunities to explore areas that are of concern and of interest to them. Beane (1997) urges middle school educators to examine how their curriculum and instructional methods build a community of learners that foster active learning, problem solving, and cooperative interaction with peers and teachers.

Interdisciplinary Teams and School Organization

When students move to a middle school setting, interdisciplinary teams helps the emergent adolescent learner make the transition from the self-contained elementary classroom to more departmentalized classrooms of the high school (Gatewood & Dilg, 1975). Interdisciplinary team structures are one way in which an atmosphere of "smallness" or community can be achieved in middle schools. This focus on community provides closer relationships between the students and their teachers and opens communication with parents. Interdisciplinary teams also provide a sense of identity for young adolescent students who often feel isolated and disconnected in large school environments.

In order to achieve these small communities of learners within a school, organizational structures need to include several critical conditions. First, an interdisciplinary team of teachers must share the same group of students and be located in classrooms that are in close proximity to each other. These teachers must also have opportunities to share common planning times on a daily basis (Alexander and George, 1993). Arnold and Stevenson (1998) add that to be effective, interdisciplinary teams should share common blocks of instructional time which will allow teachers flexibility in the time spent with one or more disciplines and how content will be presented to the students.

The configuration of teachers and disciplines in an interdisciplinary team can vary from two individuals to as many as five teachers. Classroom teachers representing different disciplines who engage in collaborative work can help their students discover the valuable connections among the social sciences, language arts, math, science and the arts related to academic topics and real world concerns (Wood, 1997). Furthermore, interdisciplinary teams that coordinate the teaching of skills and knowledge are better positioned to provide a more "coherent curriculum" for their students (Dickinson and Erb, 1997). When interdisciplinary teams of teachers work with their groups of students as a whole and group their students heterogeneously, students benefit because learning opportunities become more equitable (Arhar, 1997; Dickinson and Erb, 1997).

Interdisciplinary teams are essential to the development and implementation of integrated curriculum (Arnold and Stevenson, 1998; Dickinson and Erb 1997; Schumacher, 1995; George and Alexander, 1993). Dickinson and Erb (1997) point out that "An interdisciplinary team that has

achieved its highest levels of functioning engages in delivering interdisciplinary curriculum [and that] interdisciplinary curriculum depends on interdisciplinary teams for it broadest and most enduring implementation" (p. 40)

Effective teams go through an evolution to reach their highest level by what Erb and Doda (1989) describe as an evolutionary shift in emphasis. As teams move through different phases, the emphasis shifts from addressing logistics and procedural issues, to concerns for students needs, to enhancing their own professional growth as individuals and as a team, to the final level where integrated curriculum is planned and implemented.

Four stages of interdisciplinary team development as described by George (1992) add to those of Erb and Doda (1989). George (1992) indicates that during the first stage, the focus is on organizational structures such as sharing the same group of students, common planning time and classrooms located in the same area of the school. Teams at the second stage begin to develop a sense of community between teachers and students and among the team members themselves. As interdisciplinary teams become organized and have a sense of identity in the third stage, they begin to discuss curriculum issues and collaborate in instructional planning. Successful teams go beyond the first three stages as they realize the power of becoming involved in shared decision making at the school management level. These teams become involved in shared problem-solving and decision-making.

George and Alexander (1993) add that before teams are able to reach their highest level of performance where curriculum planning can take place, it is necessary for the team to address the foundational stages first. Teams need to work together for at least a year before they are able to begin developing

integrated units of study (Schumacher, 1995). This observation is consistent with George and Alexander's (1993) contention that teamed instruction requires more sophisticated communication skills than are required in a self-contained classroom and take time to develop.

Schumacher (1995) further suggests that effective teams have members who have similar levels of curriculum expertise, working styles that do not conflict, and complementary personalities. In support of Schumacher's suggestions, Doda (1992) indicates that teams need contrasting strengths as well as linking together instructional expertise and teaching experience to create a balanced team environment for curriculum development.

Factors that Impact Curricular Change

There is a direct relationship between students' performance and students' perception of how that learning is related to them on a personal basis (Beane, 1990; Stevenson, 1998). Since the inception of the junior high school and the later development of the middle school, it has been recognized that a curriculum that is integrated and exploratory best fits the needs of early adolescent students. Therefore, curriculum change must lead to opportunities for students' personal and professional success once they leave the school yard. Since curriculum plays such an important role in how a school defines a successful student, it is necessary to understand what factors have to be in place in order to affect change. Erickson (1995), a curriculum consultant and chair of the Washington State Standards Committee for Social Studies, clearly states, "Change just for the sake of change is wheel spinning. Change for the sake of children is our job" (p. 23). This portion of the literature search, looks at

the extrinsic and intrinsic factors that allow change to happen in school programs at the building level and in particular how the change process effects the classroom teacher.

Extrinsic Factors that Impact Curriculum Change

It is often said that education moves from one extreme to another when adopting innovations and planning changes in instruction and curriculum. Brazee and Capelluti (1995) remind us that, "Curriculum is highly personal and highly political, and making changes from the conventional curriculum is very difficult" (p. 16). Extrinsic factors influence what is taught in schools and extend beyond the control of teachers. Doll (1996), states that extrinsic factors have the potential to influence what changes are made and to what degree. This section looks at three extrinsic factors that impact teaching and learning and the process of change. School organization focuses on the factors of time, physical space, and scheduling. The content of the curriculum discusses the needs of students for life in the 21st century and school management looks at the administration and their role in the change process.

School Organization

A factor that influences many aspects of school life is school organization. One of the most widely discussed organizational issues is that of "time". Factors related to time affect how teachers use their time, how much time teachers have within the school day to teach, and time provided for professional development. Time factors affect time to plan, to teach, and to learn and to reflect for both teachers and students. Other organizational issues refer to

classroom location and print and non-print resources available for instruction. How schools deal with these issues can either prevent or promote the process of change. As discussed earlier in this chapter, traditional approaches to instruction do not always correlate with advanced technological resources and the increased demands on students to think critically and to develop interpersonal skills to solve problems collaboratively. It has been documented that a relationship exists between school improvement and opportunities for teachers to engage in professional interchange, to debate current educational practices, and to reflect on professional development activities (Dalheim, 1994, Fullan and Miles, 1992). Sufficient amounts of time are necessary for teachers to participate in such activities that will lead to professional growth that in turn will support the development of effective curriculum for today's student.

Traditionally, teacher's work is viewed as time spent with students in the classroom indicating that the role of the teacher is to instruct curriculum content. In order for teachers to take an active role in curriculum planning, the role of the teacher must be redefined so that teachers can find a balance between wanting to be with their students and being part of the decision making process. Due to the structure of their schedules, schools often do not have the flexibility of time allotments that will give teachers the time they need to make schooling a collegial effort (Donahoe, 1993). "The role of the teacher is being redefined to include the teacher as a professional decision maker who is knowledgeable and reflective. However, if the teacher's role is to change, our thinking about how a teacher's time is organized must change as well " (Watts & Castle, 1993 p. 306).

Time as well as space are partners in creating a catalyst for classroom innovation, especially when the move is toward integrated instruction. It has been well documented that interdisciplinary teams who integrate need to have common planning times and classrooms located close to each other in order to collaboratively plan and implemented integrated lessons (Beane, 1990; Dickinson and Erb, 1997; Stevenson, 1998). Goodlad (1984) reminds us that there are few "infrastructures designed to encourage or support either communication among teachers in improving their teaching or collaboration in attacking school-wide problems. And so teachers, like their students, to a large extent carry on side by side similar but essentially separated activities" (p. 188). Doll (1996) takes a similar view "based on the idea that schools, as they are now structured or organized, lack the ability to provide learners with real education" (p. 33). Doll suggests that educational settings that efficiently use space and time and provide alternative learning sites strive to match the school structure to the instructional task. Space, time and alternative learning sites might range from scheduled blocks-of-time to service learning in a community or school setting.

In order to create an environment that fosters collaboration between teachers and to provide more concentrated learning time, many schools across the country are incorporating scheduled blocks-of-time into their academic day. Scheduling longer blocks of time, at any grade level, will reduce content fragmentation, provide opportunities for extended learning, and address the needs of students that require more time to learn than others (Canady and Rettig, 1995). Considering the vast amounts of information students are exposed to, keeping traditional 50 minute class periods does not allow time or

space for students to explore a concept in depth over an extended period of time.

Content of the Curriculum

Being educated in contemporary society goes beyond doing well on standardized tests. Students need to engage in meaningful learning that reflects their ability to solve everyday reasoning problems. One solution to meeting such challenges at the middle level is to implement integrated curriculum into school programs. The nature of young adolescent thinking is to make sense of their own lives as well as investigate questions about the larger world (Beane, 1990; Brazee and Capelluti, 1995; Scales, 1996). Integrated instruction provides topics that are relevant to society through studies about self, the environment, and the community.

Traditionally, curriculum, at the middle level, has been discipline based and taught as isolated subjects. Advocates for curriculum integration support curriculum that involves creating meaningful contexts that organize and connect learning experiences from which to draw when solving real life problems (Stevenson & Carr, 1993; Beane, 1995; Carnegie, 1989). Fried (1995) characterizes today's successful teachers as ones who look for ways to forge links between facts, their meaning, and utilization.

The age old question of "What knowledge is of most worth" or perhaps more appropriately for today's world , "What do we include" (Fried, 1995) creates controversy over coverage of a wide range of content versus working toward a depth of understanding. Often teachers feel they must "cover the curriculum" and in doing so it becomes increasingly difficult for them to create

learning experiences that will help students discover the key understandings of a discipline. Furthermore, Fried (1995) reminds us, "Students cannot dig deeply when they are rushing to get through quantities of stuff" (p. 57).

Success in careers such as business, computer technology, and education require innovative and independent thinkers. Employers want individuals who can synthesize knowledge by comparing and contrasting related material, who can evaluate the relevance of that material, and who can eventually and systematically make that information their own (Fried, 1995). In order to be successful in today's world, individuals must develop analytic, creative and practical skills and demonstrate how these skills are interrelated (Sternberg, 1996). Therefore, schools have the responsibility for providing a curriculum that helps students see relationships between what they learn in school and what they will need to be productive citizens in the future, not a curriculum that is somehow designed to cover all the knowledge humankind has amassed in the last 2100 years.

Even though real life decisions are not made according to specific discipline content, students must have critical content knowledge to see the relationships between and among the disciplines. Teachers need to provide important foundational knowledge in order for students to develop a deeper understanding of key concepts and conceptual ideas within each of the disciplines (Erickson, 1998). It is only through a knowledge of relevant skills, concepts, and processes associated with each discipline that students will be able to transfer knowledge from one discipline to another in ways that demonstrates the relationships between and among subjects areas. The power of the disciplines cannot be negated. (Jacobs, 1997).

Curriculum planners are challenged to design curriculum that prepares students for a world very different from anything that today's curriculum developers have had to face in their own lives. Perkins (1991) reminds us that "thoughtful learning rich with connection-making is needed for insight and for the lively and flexible use of knowledge" (p. 6). Integrated curriculum, at the middle level, can provide students opportunities to solve real-life problems that naturally connect the disciplines. In this way, the curriculum can foster the bringing together of early adolescent students and the society in which they live. For example, a theme based on identities can help students develop a personal identity while at the same time explore cultural diversity within the American society (Beane, 1990).

Educational change cannot be successful when the attempts to solve problems are superficial or when it is done as a response to a crisis (Fullan & Miles, 1992; Glickman, Lunsford & Szuminski 1995). Current concerns about our educational system range from concerns about low standardized test scores, teacher accountability and how subject matter in the different disciplines should be taught. Anderson's (1995) findings from nine case studies of schools engaged in successful curriculum change, indicate that effective change in school programs is a long process and requires basic alterations in school culture and in the beliefs and values of school personnel. As stated earlier in the chapter, effective and lasting change is a gradual process that can take between 3-5 years to accomplish. Many constituents – administrators, teachers, and building principals – need to be invested in the purpose for change, its process and its implementation.

Administrators and the Change Process

Constituents, other than the teachers, who have an impact on the change process are those who manage the schools. Some school districts make mandates from a top-down model with little teacher input while other schools operate from a grass-roots perspective where teachers and administrators work in concert to develop programs and schedules or even hire new staff members. An administrator who creates an environment that is collaborative, supportive, and nurturing for staff members shows support for the change process (Garvin, 1995; Brubaker, 1994; Sagor, 1992; Fullan, 1992; Hall and Hord, 1984). Capable administrators are people who are teacher-centered and sensitive to the needs of their faculty through the cultivation of good listening skills and the ability to be effective communicators. These educational leaders are informed on best practices, have a vision of what is best for the entire school community, and are advocates for staff development. School communities that share a common vision establish solidarity in purpose and focus.

Glickman (1995) sees the principal's role as an instructional leader of leaders who assists the group in making vision-building a "collective exercise." Fullan (1992) suggests that the best management structure is a "cross-role group" that includes teachers, department heads, administrators, students and parents. One of the positive outcomes of "cross-role group" management is the raise in teacher commitment.. Change can only happen when there is shared leadership and collective vision (Lipsitz et al, 1997; Tye, 1992).

Fullan (1990) further suggests that when implementation of an innovation is lacking support it does not necessarily mean rejection of that innovation. The number of variables that affect the change process are sometimes beyond the

control of those wishing to change school programs such as available resources, time, space, and personal values.

Intrinsic Factors that Impact Curriculum Change

Intrinsic factors are as important to the change process as are the external concerns of those involved. Anderson's (1995) findings from nine case studies of schools engaged in successful curriculum change, indicate that effective change in school programs is a long process and requires basic alterations in school culture and in the beliefs and values of school personnel.

Fullan (1990) emphasizes that it would be incorrect to assume that everyone sees a need for change or any innovation through the same set of lenses. Even if consensus has been reached concerning a need for a proposed change, conflicts often will arise as individuals involved interject their personal vision of how the innovation should be shaped and how it should be used in a particular educational setting.

How teachers respond to an innovation can also impact whether or not implementation occurs. Teachers' acceptance and comfort with an innovation is the most crucial factor in its ultimate implementation. Hall and Hord's (1984) fifteen years of research in schools focused on understanding and describing the change process which led them to identify specific "stages of concern" among the teachers they studied. These stages of concern are:

- little concern or awareness, basically a nonuser
- becoming aware of a new idea or innovation with no direct involvement
- begins to evaluate own ability to meet the demands of an innovation
- focuses on management issues of time, scheduling, and organization

- evaluates the relevance of an innovation for student learning
- seeks collaboration from colleagues when implementing an innovation
- reflects on the effectiveness of an innovation and makes changes accordingly

According to Hall and Hord (1984), the practical use of this research can be used in developing an overall plan for the change process or the implementation of a new innovation. As teachers move through these stages, support should be nurturing, positive, and sensitive to those in the midst of the change process.

Those individuals and school districts that have been successful change agents have a shared vision, know the outcomes they wish to achieve, and develop purposeful strategies to attain their common goals. These individuals evaluate their progress throughout the process and are aware of what they are gaining with the actions they have taken. When they notice that something is not working, they reevaluate their approach. The process is thoughtful, creative and practical allowing for enough "time" to foster collegial relationships and collaborative planning.

Summary

The literature reviewed in this chapter reports the research on best practices for middle school students. Effective middle schools provide an environment that supports early adolescents' social, emotional, intellectual, and physical development. A curriculum that integrates the disciplines around themes, gives pre-adolescent students opportunities to study issues or topics thoroughly and in depth. School programs that integrate the curriculum often

require changes in organizational structures, how content is presented, and how teachers plan instruction and work together.

CHAPTER III

METHODS AND PROCEDURES

Overview of the Study

The major purposes of this study were to identify the professional beliefs of middle level educators who carry out curriculum integration and to identify conditions that support the implementation of integrated curriculum. Through cross-case analysis of interview questions and questionnaire responses, data were classified into two categories: (1) extrinsic factors that originated from outside of a teacher's control and (2) intrinsic factors that reflected a teacher's personal beliefs.

In order to determine if the proposed interview questions and questionnaire would provide enough information to develop categories for cross-case analysis of the data, a pilot study was conducted prior to the actual study. Results from the pilot study yielded pages of relevant data related to the research question. The pilot study also helped the researcher recognize a need to reword the research question and adjust the questionnaire so that middle school teachers could express a broader view of how they designed and implemented integrated curriculum. Further discussion on the modifications made as a result of the pilot study will be discussed later in this chapter.

The individuals who participated in the actual study included nine teachers and one student teacher. These teachers made up two interdisciplinary teams of five each. Each team was comprised four core subject

teachers (social studies, English, math and science) who were beginning their second year working together as a team. The fifth member on one team was a special education teacher and the fifth member of the other team was a student teacher.

Data collection took place over a three-month period at the site study school which was given the name of Winding Road Middle School by the investigator. Data collection procedures involved a questionnaire completed by each participant, individual interviews of all ten teachers carried out by the investigator, and videotaped team meetings that included three sessions for each team. Individual participants completed a questionnaire that focused on personal data related to educational and teaching experiences, instructional methods, and professional growth activities. Ten hours of audio-taped open-ended interviews which averaged about one hour per interview were recorded over the course of three months. Approximately six and a half hours of video taped team meeting sessions were also recorded. One team was videotaped for a total of 150 minutes and the other team for approximately 240 minutes. The amount of video taping time differed between the teams for two reasons: (1) because the time designated for team planning varied between the two teams, and (2) because one planned taping was interrupted by a scheduled parent conference.

The responses to the standardized open-ended interview questions were analyzed in terms of cross-case analysis method developed by Patton (1990). This is a method of grouping together answers from different people to common questions in order to analyze different perspectives on central issues. Prior to being interviewed, each participant was asked to complete a questionnaire

which addressed three areas: (1) personal data – teaching certification and experience, (2) instruction/ pedagogy - teaching methods, student assessment, work as a team, and (3) professional growth – professional growth activities. The written questionnaire was used to gather professional background information about the respondents and to confirm, clarify, and expand data which would be collected through the interviews and the videotaped team planning sessions. The videotaped planning sessions were used to gain more detailed information on the content of integrated units being designed or revised and to observe and record the process used by the individuals in a team setting to develop or reflect upon their integrated units and their work with their students.

Design Selected

Qualitative-naturalistic inquiry (Guba, 1978) was chosen to carry out an investigation about the professional beliefs of these ten middle level educators who focus on curriculum integration. One of the primary purposes of such a naturalistic or ethnographic perspective is to gather data in a setting where naturally occurring events or programs take place (Bogdan and Biklen, 1992; Patton, 1990). When using this method the meanings individuals construct from their own experiences as they interact within a particular social setting are examined.

In order to identify the professional beliefs of middle level educators who carry out curriculum integration and to determine the support needed for its implementation at Winding Road Middle School, field notes, questionnaires, audio-taped interviews, and videotaped team meeting sessions were used for

data collection. In an effort to discover general patterns from specific observations among the participants in this setting, inductive analysis or analysis of data to discover important categories, dimensions, and interrelationships was used (Glaser and Strauss, 1967; Patton, 1990).

Pilot Study

Seidman, (1991), advises that ". . . the unanticipated twists and turns of the interviewing process and the complexities of the interviewing relationship deserve exploration before researchers plunge headlong into the thick of their projects" (p. 29). Pilot studies can be useful to test ideas or methods, to explore the implications of that data, and to assess some of the practical aspects of making contact and conducting interviews (Marshall and Rossman, 1995; Maxwell, 1996; Seidman, 1991).

In order to determine if the interview questions were effective and useful, a pilot study was conducted prior to beginning the research at Winding Road Middle School. Three fifth grade teachers from a local elementary/middle school who integrate the curriculum for specific thematic units and work as a team volunteered to complete the questionnaire and to be interviewed individually. They also agreed to discuss the process as well as their responses to help the researcher establish clarity and validity for her study.

As a result of the pilot study several modifications were made to the research question and to specific questions in the interview and in the questionnaire. Initially, this researcher believed that professional beliefs about integrated curriculum could only be obtained by interviewing teachers who used integrated curriculum on a continuous basis. Even though the teachers in

the pilot study did not use integrated curriculum “on a continuous basis”, specific beliefs about integrated curriculum were quite evident in the data they supplied. Therefore, the phrase “on a continuous basis" was deleted from the original research question. The new question read, “What are the professional beliefs of middle school educators who integrate the curriculum?”

The participants in the pilot study provided suggestions regarding vague wording and redundancy in several questions in the interview form and on the questionnaire. The pilot study also demonstrated that patterns and commonalties among participants who engage in integrated curriculum were possible to find through both the structured questionnaires and the more open-ended interviews.

Sample Selection and Setting

Winding Road Middle School is located in a small picturesque New England community that attracts a large tourist population throughout the summer and fall. This school was selected on the recommendation of the school district's Director of Curriculum because it was a school that was actively engaged in integrated curriculum. The investigator was acquainted with the Director of Curriculum through professional organizations and other collegial activities. The Director of Curriculum was known and respected for her work with the New England League of Middle Schools and for her support of integrated curriculum at the middle level. Before the study began, the Director of Curriculum asked that a meeting be arranged with the school principal to discuss the details of the study. During that meeting, the principal and a seventh grade team leader who would be part of the study were assured that

the data would be confidential and that only the researcher would have access to the videotapes and audio-tapes. In addition, the researcher agreed to replace the names of the teachers with pseudonyms and to disguise the identity of the school. The school district's administration and building principal were supportive of the research and gave permission for the study to be carried out for a three month period from October through December which comprised the fall semester of 1997.

After meeting with the building principal and the seventh grade team leader, it was decided that all of the teachers at the site study school should be introduced to the study and that after an introduction to the design and purpose of the study be then permitted to volunteer for participation. After this agreed upon initial introduction, two interdisciplinary teams in the school emerged as the participants for the study.

The teachers who agreed to participate completed an informed consent document (see Appendix A) to ensure that all parties involved understood the nature of the research and the confidentiality issues. Since the interviews and videotapes involved human subjects, and in compliance with Lesley College's human subject policy, a statement concerning the use of human subjects in this study was filed with Lesley College's Human Subjects Committee (see Appendix A).

The ten participants in the study were members of two interdisciplinary teams. In order to maintain confidentiality, the investigator assigned descriptive names, the Outback Team and the Longview Team. Each team had four core subject teachers (social studies, English, science, and math). Although each team was assigned a special education teacher, only the Outback Team's

special needs teacher chose to participate in the study. The special education teacher from the Longview Team, chose not to participate because his students were part of a pull out program and only minimally involved in regular team activities and integrated curriculum. The fifth member of the Longview Team was a student teacher preparing for middle school certification with a focus in science.

Winding Road Middle School is a seventh and eighth school with approximately 500 students. Students attending Winding Road Middle School came from six area towns. The Outback and the Longview Teams each served around 100 students that represented approximately 40 per cent of the student population. The Outback Team included four classes of seventh grade students and the Longview Team was comprised of a multi-aged group of both seventh and eighth graders. Each team at Winding Road Middle School has two fifty minute back-to-back planning periods each day. Technically, fifty minutes were provided for teams to plan together and the other fifty minutes were designated for the teacher's individual preparation time. Throughout the school, both seventh and eighth grade teams had scheduled blocks-of-time in which to teach core subjects. This configuration gave teachers 200 minutes of flexible and continuous core instructional time to teach math, English, science, and social studies.

A large area in which to conduct whole team activities or cooperative group lessons was available to each team. These large areas were primarily two classrooms with a folding wall that was opened and closed as needed. At the time of this study, the Outback Team who taught their classes in two portable

classrooms used the cafeteria as their open space in order to conduct their large group activities.

At the time of this study the Longview Team was entering their second year as a combination seventh and eighth grade team. Prior to the current arrangement, Winding Road Middle School had three person teams with three different content area specialists on each. This meant that one subject (science or social studies depending on the team) was taught by teachers who did not have certification in those areas.

The move to the current four person team configuration was, in part, a reaction to concerns about student preparedness for higher level content at the high school level in specific disciplines, namely science and social studies. Over the past several years, parents and some administrators questioned whether the middle school curriculum was providing enough academic rigor in its programs to adequately prepare students for high school work. Advocates for a more academically rigorous curriculum were vocal about what they saw as too much "fluff" or fun activities and not enough content substance in the types of projects and activities required of students.

Another factor that suggested a closer look at how content was being taught came from scores on state mandated tests that were based on the State Curriculum Frameworks. These tests were administered to students at the end of grades three, six, and ten in the areas of social studies, language arts, math, and science (only in grades six and ten). Since the test questions were based upon objectives outlined in the State Curriculum Frameworks, school districts throughout the state were requiring teachers to match their current curriculum to the state frameworks. Establishing this match was crucial since test scores for

each school district were published in state-wide and local newspapers. In response to these concerns, some teachers felt a growing pressure to return to more traditional teaching with less emphasis on integration and more focus on a subject specific curriculum.

Two years ago, in response to academic concerns and a growing student population, the administration decided to form teams with certified teachers in science, social studies, English, and math. When this decision was made two seventh and two eighth grade teams were formed by moving existing staff to different teams and hiring several new teachers. This rearrangement created four interdisciplinary teams with 100 students and four core teachers on each team. The remainder of the students, 50 eight graders and 50 seventh graders still needed to be placed on teams. Because of budget constraints, money was no longer available to hire additional teachers to form two more teams. The teachers on the present Longview Team saw this as an opportunity to work together as a multi-aged combined seventh and eighth grade team. Since these teacher had either taught together on other teams or had known each other for some time, they felt comfortable engaging in a multi-aged teaching arrangement even though this was a concept new to all of them.

Prior to restructuring the organization of interdisciplinary teams from three to four core teachers, the school district in 1992, formed an Administrative Team to develop a framework for a district-wide strategic plan. Two years later, during the 1994-95 school year, a Curriculum Goals Task Force was established to continue the work of the Administrative Team. The Task Force was asked to draft, to present, to review, and to rewrite, learner benchmarks, and performance tasks for the district's elementary, middle school, and high

school students. They also were asked to generate “curriculum frames” or specific questions related to future thematic unit development, and specific curriculum units for each grade level.

In 1996, an outside curriculum consultant was hired to help teachers throughout the district to further develop “Curriculum Frames”. The purpose for developing curriculum frames was to initiate the beginning steps in writing integrated, performance-based instructional units. Prior to meeting with the consultant, teachers, at all grade levels, wrote units and field tested them. Because of the state testing discussed earlier, Winding Road Middle School was in the process of matching current curriculum objectives to the state standards while at the same time continuing to develop the district's strategic plan that had curriculum goals and objectives of its own.

The Participants

Pseudonyms were used for each of the participants in the study. The Outback Team was made up by Rob who served as the team leader and who had taught middle school English for sixteen years. Last year, Rob left his classroom position temporarily to fill-in for the principal who resigned mid-year. Joan, the math teacher and Doug, the social studies teacher were both veteran middle school educators with over twenty years of experience each. Scott taught science and was experiencing middle school and interdisciplinary teaming for the first time. Prior to this year, Scott taught high school science in another school district. Kate was the special education teacher assigned to the Outback Team. She was a beginning teacher and had accepted her current position in January of the previous school year.

The members of the Longview Team were Jay, Longview's team leader, who taught English and had been a middle school educator for eight years. Two other teachers, Stacie and John had worked together for ten years on various teams at Winding Road Middle School. Stacie had been a math teacher for ten years and John had taught social studies for sixteen.
Matt, the fourth member had an environmental science background and had been a middle school science teacher for eleven years. At the time of this study, the Longview Team also included Peter, a student teacher under Matt's supervision. Peter participated in the study because he was involved in the teaching and planning of integrated units as part of his practicum experience.

Further information regarding the participants' educational backgrounds was taken from the individual questionnaires and is shown in Figure 3.1. Of my sample, five out of ten teachers were specifically educated to teach young adolescents. The importance of middle school teachers receiving training to work with young adolescents is supported in the literature and by middle school advocates (Carnegie Council, 1989; Beane, 1990).

Before videotaping of the team planning sessions began, the participants informed the investigator that they would be discussing units currently in progress and discussing the revision of units that were going to be taught later in the semester. The Outback Team was planning for a religion unit that was scheduled to begin before the December vacation. Students were to research a world religion and present their results. Since this was a unit that had been taught previously, the focus of the discussions centered around scheduling issues, revising assessment forms and check sheets for their students, as well as revisiting intended outcomes for students' final research projects. Their True

Love Unit, a research project on different countries was also discussed briefly during the videotaping sessions.

The Longview Team often worked on two integrated units at a time in their planning sessions. As one unit was nearing completion the next unit was being planned or revised. During the time of this study, the Longview Team was completing their Native American Inter-Tribal Project while at the same time they were in the process of planning their upcoming Garboloby unit, a science unit based on the environmental effects of garbage from a global as well as a local perspective. The Native American Inter-Tribal Project was an integrated unit that required pairs of students to study different Native American tribes in depth and to present their findings to peers and to their teachers. This unit required students to use their knowledge of geography and history as well as their ability to work collaboratively to plan, research, and present their findings. The Longview teachers indicated that overlapping the work on units during their

Certification	Focus Area	Years of Teaching
Elementary		2
Elementary/Middle School	Math	1
Middle School	Environmental Science	2
Middle/Secondary	Social Studies Environmental Science, General Science, Biology	2
Secondary	English, Social Studies	2
K-12	Elementary and Special Education	1
Number of Teachers with Post-Baccalaureate Degrees		3

Figure 3.1 Teacher Certification and Content Focus Areas of Participants

planning times helped them to keep things moving and in some cases helped them see how one unit could be connected to another.

Data Collection

The primary method of data collection that focused on the teachers as individual educators was the use of an open-ended interview. Seidman (1991) said, “Interviewing provides access to the context of people’s behavior and thereby provides a way for researchers to understand the meaning of that behavior” (p. 4). Interviews, in this particular study, used an open-ended approach so that participants might answer the questions in ways that reflected their own experiences or use whatever terms they wanted to describe their feelings and thoughts (Patton, 1990). These interviews took place during team or individual planning times and on one occasion, after the school day had ended. Each interview lasted between fifty and ninety minutes depending upon the teacher's schedule. (see Appendix C)

To further understand the participants beliefs about planning and implementing integrated curriculum, a number of team meetings were videotaped for each team. Observations made during the planning sessions, gave the investigator more information about participants' perspectives related to integration. For example, watching and listening to what the individual teachers said in the planning of an integrated unit provided a much clearer picture of the teacher's actual beliefs about integrated curriculum and the conditions that support its implementation than what was learned from the interview data alone.

The Outback and Longview Teams were each videotaped three times during team planning sessions. Each session lasted approximately 50 minutes for the Outback Team and about 100 minutes for the Longview Team. Generally, the researcher was unable to talk informally with team members after videotaped sessions or after interviews because the teachers needed to keep to their schedules and resume classes, or on one occasion, to go to a scheduled parent conference. On a few occasions, the researcher was able to speak informally with members of the Longview Team when interviews were conducted at the end of the school day. This informal discussion reinforced comments made by several teachers during the formal interviews.

Prior to conducting the interviews or videotaping team planning sessions, the participants were asked to complete individual questionnaires (see Appendix B). While some of the information obtained from the questionnaires supported statements made in the interviews, the responses did not add significantly to the data. In some cases, the teachers did not answer specific questions and others chose to answer in narrative form.

Data Categories and Analysis

Guba (1978) suggests that analysis primarily is used to identify "recurring regularities" or patterns in the data. When seeking these patterns, analysis should also entail data reduction so that the researcher can manage the volumes of material collected. As the process of data reduction begins, the focus is on determining and looking for logical connections or patterns. Once these patterns are determined, then they can be judged by two criteria, namely "internal homogeneity" and "external heterogeneity" (Patton, 1990). Patton

explains the first criterion as “the extent to which the data that belongs in a certain category hold together or ‘dovetail’ in a meaningful way” (p. 403). The second criterion concerns “the extent to which differences among categories are bold and clear” (p. 403). In other words, the categories should demonstrate the commonalties within the categories while at the same time clearly show how each category maintains its own individual characteristics.

Marshall and Rossman (1995) speak of the complexity of this category generation phase of data analysis. They say, “Identifying salient themes, recurring ideas or language, and patterns of belief that link people and settings together is the most intellectually challenging phase of data analysis and one that can integrate the entire endeavor” (p. 114). Bogdan and Biklin (1992) refer to coding categories as “coding families” where “certain words, phrases, and patterns of behavior, which reflect subjects’ ways of thinking, repeat and stand out. (p. 166).

As suggested by Patton (1990), the investigator recorded potential coding categories in the margins of each interview transcript. Through inductive analysis and many readings and re-readings of the transcribed interview responses, patterns and categories began to emerge out of the data. From this initial analysis, two broad constructs emerged. One was a set of extrinsic factors or factors teachers had no control or say over, the other was intrinsic factors or those factors more specific to each individual teacher.

Each broad construct was then separately analyzed to identify the specific extrinsic or intrinsic factors that influenced professional beliefs and support systems of middle level educators who integrate the curriculum. When related responses were found they were grouped together and placed in a

folder labeled with a particular code (e.g., school structure, definition of integrated curriculum, role as a team member). Within each folder, the salient points expressed verbally by each participant were written on posits which could be moved by the researcher as themes emerged. Being able to move the responses around helped to further refine and organize the data. In order to maintain the identity of each respondent, a different colored paper was used to record each participant's transcribed interview. The coding categories used to represent the data became evident and the patterns that emerged are shown in Figure 3.2.

Coding Categories

Lortie's (1975) research on the characteristics of persons who choose teaching as a career and the social and economic context in which teachers teach speaks of the extrinsic and intrinsic rewards of the profession. Lortie explains extrinsic rewards as rewards that exist independently of the individual, but are experienced by all teachers (e.g., salary or contractual agreements) and intrinsic rewards as more subjective in nature and vary from person to person. Since the research question leading this study was "What are the professional beliefs of middle level educators who integrate the curriculum and what are the conditions that support the implementation of integrated curriculum?", it was necessary to identify responses which indicated factors that influenced professional beliefs and support systems. Therefore, using Lortie's work as a model, a conceptual framework was designed to focus on extrinsic factors or those elements over which teachers had no control and intrinsic factors or the elements that were inherent within the individual. Categories under extrinsic

and intrinsic factors represented the common themes, issues, and patterns that emerged from respondents' individual interviews, observations made from videotaped sessions, and information collected from the questionnaires. In analyzing the data, a major goal was to categorize the participants' responses and behaviors from the videotapes and the interviews into extrinsic or intrinsic factors.

Figure 3.2 gives an overview of the categories used to code both the extrinsic and intrinsic factors found to influence professional beliefs. A more detailed description of the specific patterns and issues that were culled from the interviews, questionnaires, and videotapes is shown in Figure 3.3.

In Figure 3.3, the extrinsic factors displayed in the column on the left represent factors that were beyond the control of the teachers in this study. The intrinsic factors shown in the column on the right represents factors that are specific to individual teachers.

Validity

In order to maintain validity of the study, the process of triangulation was used. Patton (1990) defines triangulation as "the combination of methodologies in the study of the same phenomena or program (p. 187). According to Maxell (1996), triangulation . . . . "reduces the risk that conclusions will reflect only the systematic biases or limitation of a specific method and it allows you to gain a better assessment of the validity and generality of the explanations that you develop" (p. 75-76). The different methods of data collection used in this study were audio-taped interviews, videotaped observations, and questionnaires. See Figure 3.4.

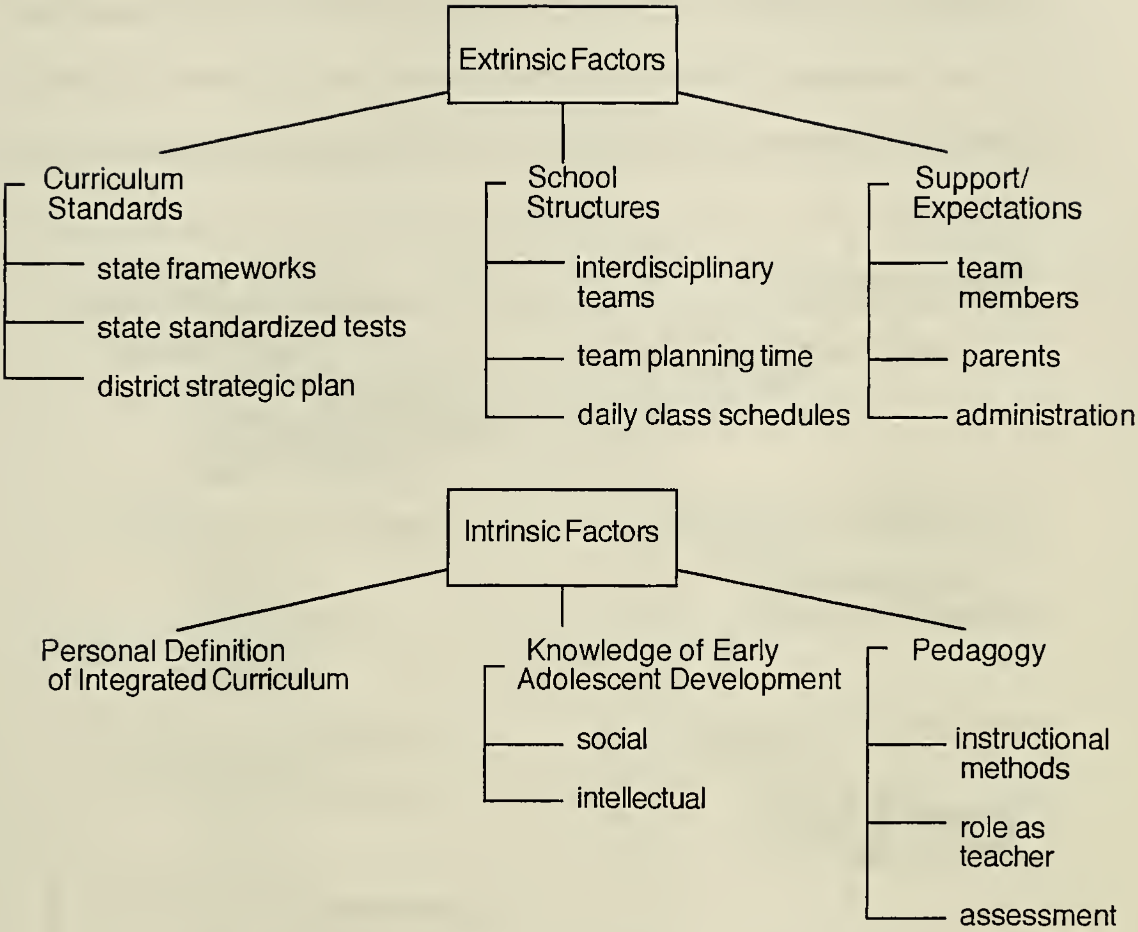

Figure 3.2 Overview of Coding Categories for Data Analysis

During analysis, audio-taped interviews were transcribed for each participant and videotaped planning sessions were viewed several times. Although interviews were the primary method of data collection, videotaped team planning sessions helped validate what respondents said in their interviews through observing actual integrated unit planning or revising. The videotaping of team planning meetings had to be scheduled around parent conferences and other school obligations, therefore the taping was interspersed

throughout the interview sessions and followed no particular pattern. Since the observations of team planning sessions had to be arranged in advance, the ongoing or continuous process of planning or revising integrated units may not have been accurately represented. The interviews permitted the investigator to

Extrinsic Factors	**Intrinsic Factors**
• School Structure interdisciplinary teams common planning time scheduled block-of-time classroom location	• Integrated Curriculum Defined
• Roles Diversity on Teams mentor manager pragmatists visionary encourager	• Knowledge of Middle Level Students social development cognitive development
• Personal Characteristics of of Team Members interpersonal skills work ethic	• Pedagogy of Teaching and Learning role of teacher instructional methods student assessment
• State Frameworks curriculum standards for core subjects	
• State Tests standardized test based on state frameworks	
• School District Strategic Plan commencement goals learner benchmarks performance tasks (K-12) grade level integrated units	
• Administrative Support and Expectations knowledge of team programs educational leader	
• Parental Expectations academic rigor choice of teams	

Figure 3.3. Subtopics of major coding categories that represent extrinsic and intrinsic factors.

go beyond any "staged" behavior during the observations and explore the personal views about the design and implementation of integrated instruction.

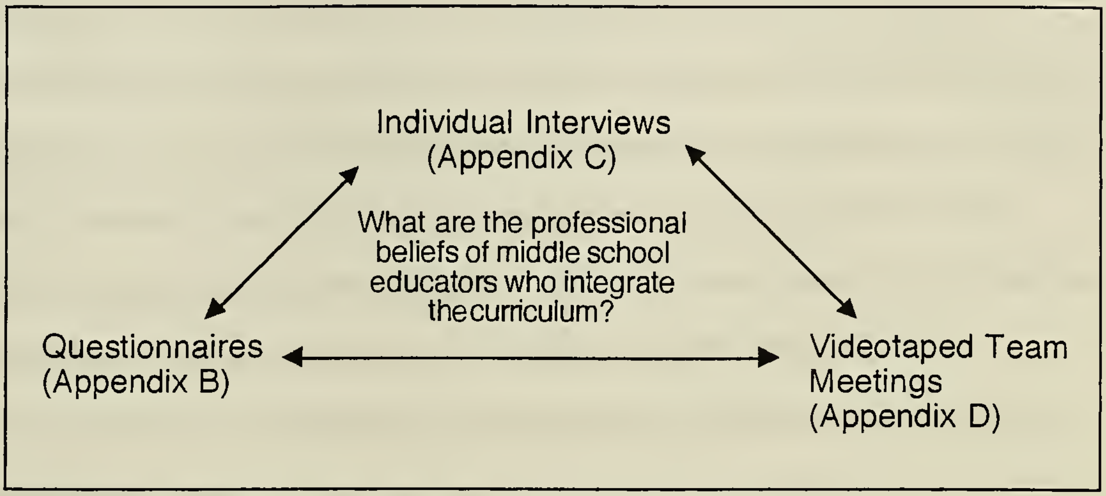

Figure 3.4 Triangulation model used for data analysis.

Before any videotaping or interviewing was conducted, each participant completed an individual questionnaire. The questionnaire was used to ask for specific information about participants' educational backgrounds, their teaching methodology, and their professional growth activities. As mentioned earlier in this chapter, the questionnaire was used to confirm, expand, and clarify the data.

Research Limitations

This study is limited by a single research site and a small number of participants. The small number of participants mean that the conclusions made on the basis of this study are limited to the perceptions or beliefs represented by the teachers in this school. Also, the data obtained from the interviews was

anecdotal in nature and based upon participants' memories, therefore there is no way to confirm its accuracy.

Additionally, the investigator's time at the school that focused on the team meetings and planning sessions was limited by her own professional commitments and by the teachers' schedules. Videotaping sessions had to be scheduled in advance, because of parent conferences or special events at the school, therefore, the content of those meetings may not have been totally representative of usual common planning times. Certainly more time at the site would have allowed the investigator additional opportunities to confirm interview data and to observe the ongoing planning of the two teams during their meeting times.

This research was conducted in a single middle school in a single town in New England and the ten participants represented only two of the five interdisciplinary teams functioning at the time. Considering this limited context, the question must be raised about whether the results from this study can be generalized to other middle schools and other interdisciplinary teams. Guba (1978) suggests that in qualitative-naturalistic inquiry, possible generalizations should be regarded as working hypothesis and tested again in other situations. Therefore, the data collected through interviews, questionnaires, and videotaped team planning sessions in this study, will be analyzed for individual views and practices related to each participants' use of curriculum integration. Identification of certain commonalties can then be compared to other middle schools that integrate the curriculum to determine possible generalization about the factors that are needed for the implementation of curriculum integration. In determining these factors, teacher preparation programs can then compare the

content and methodology in their college courses to how a real world interdisciplinary team functions. Focusing on what individual teachers do within the team structure to plan curriculum integration such as engaging in collaborative problem solving and unit planning and understanding how integrated learning benefits early adolescents social, emotional and intellectual development can also be considered for its implications for teacher preparation of middle level educators.

Summary

This chapter has carefully described the methods and procedures used to both identify the professional beliefs of middle level educators who integrate the curriculum and to identify the conditions which support the implementation of such integrated curriculum at the middle school level. Research limitations and data analysis strategies were also explained.

CHAPTER IV

RESEARCH FINDINGS - EXTRINSIC FACTORS

Content Analysis Interpretation

The purpose of this investigation was to collect data on the professional beliefs of middle school educators who integrate the curriculum. Furthermore, I sought to identify the conditions that support the development and implementation of integrated curriculum. The data collected was comprised of ten taped interviews, questionnaires and approximately six hours of videotaped team meetings. An interview format organized the questions into two broad constructs one focused on professional beliefs and the other on school and community support. Within these two broad constructs, subcategories of extrinsic; factors that originate from outside of a teacher's control and intrinsic; factors that reflect a teacher's personal beliefs, were identified. The questionnaires and videotaped observations were studied in concert with the interview data gathered from each teacher.

These three sources yielded vast amounts of data that required review of the interview transcripts and videotaped planning sessions many times to gain a "heightened awareness of the data" (Marshall & Rossman, 1995). Patton (1990) describes analysis as a challenge "to make sense of the data, to reduce the volume of information, to identify significant patterns, and to construct a framework for communicating the essence of what the data reveal" (p. 371). Through extended study and analysis of the data, patterns and connections

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

among the interview excerpts emerged that indicated both extrinsic factors and intrinsic factors had an impact on how and to what degree these teachers integrated the curriculum.

The focus of this chapter will be on the following extrinsic factors as identified by the participants:

- school organizational structures
- state frameworks and the school district's strategic plan
- roles and characteristics of team members
- administrative expectations and support at the building and district levels
- parental expectations

Chapter Five will focus on intrinsic factors that emerged from the interviews and from the videotaped team planning sessions. The most noteworthy of these were:

- how teachers defined integrated curriculum
- teachers knowledge of middle level students
- pedagogy related to the design and implementation of integrated units

Content Analysis Interpretation of Extrinsic Factors

Analysis, as stated by Marshall and Rossman (1995) should involve the "regularities" or commonalties in the setting or people chosen for the study. Through the analysis of the data from this study, a common element in the extrinsic factors showed how the state, the administration, the parents, and the teachers themselves influenced instruction and curriculum design.

Extrinsic factors are those components of school life which are beyond the teachers' control and impact what they do or do not do in their school. Such factors might include state and district curriculum standards, parental and administrative expectations, and organizational structures that shape the school day.

The remainder of this chapter analyzes the specific extrinsic factors that were emphasized by the teachers at Winding Road Middle School through their interviews and videotaped team planning sessions. Since the structural organization of a school often influences instructional space and influence when and what amount of time is allocated to team planning sessions, this section will begin by focusing on the structural components as they relate to Winding Road Middle School.

Structural Components

For this study, structural components refer to common planning times for each team, classroom design and physical location, and class schedules for instructional time.

Common Planning Time

The teachers in this study found their physical space, the scheduled-block-of-time instructional arrangement and their common planning time to work well for their programs. However, the Outback and Longview teams used their common planning times differently. For the Outback Team, there was a clear distinction made between personal or “prep” time and team planning time. Generally, these teachers met as a team during the first half of their planning

period then returned to their own classrooms for "prep" time. During their team planning sessions they discussed scheduling for parent meetings, academic and disciplinary problems with particular students, and planned for upcoming units.

The Longview Team felt that the entire 100 minutes were necessary to accomplish unit planning, address students' needs, and plan parent conferences. This left no time for individual planning which all members of the team believed was worth giving up for the sake of pulling together the resources of all the team members. John, one of the teachers, speaks to the advantage of being able to plan as a team for the total 100 minutes. He says:

> Sometimes the work is such that you can't cut it off. You can't stop at the end of 50 minutes and say, "Oh, it's prep time now, I'm going to go correct my papers." It was talking about things that didn't seem to get anywhere, then all of a sudden things started to fall in place and you needed that extra time. It's not necessarily 50 minutes that work well. But a hundred minutes, boy you can get a lot done!

Since both teams discussed similar issues during their team meetings such as parent conferences, problems with particular students, and integrated units the different approaches to planning appear to be a matter of preference.

Classroom Location

All of the teachers interviewed strongly supported and valued what Arnold and Stevenson (1998) refer to as a "team's home territory" that provides a means for students to bond with their peers as well as with their teachers. At the time of this study, enrollments at Winding Road Middle School were growing

rapidly which put a strain on available space. As a result, the Outback Team chose to move into two modular buildings each of which contained two classrooms. In some ways, the physical distancing of these actual structures from the rest of the school created a community unto itself for this team. However, by moving into the modules, the Outback Team no longer had a large open space that was always available for whole group instruction. In order to accommodate large group activities, the Outback Team was assigned to the cafeteria. This meant they had to work around scheduled lunch periods for the entire school.

While videotaping a team meeting Joan wanted to know if the walls between the two classrooms could be taken down. Joan missed being able to open the walls, as they were able to do prior to moving to the portables. She felt that the lack of open space prohibited group work, the ability of teachers to help monitor students while another teacher was teaching, and required them to teach a single lesson four times to the smaller groups which could fit into the new space. She explained:

> We were upstairs where they had one of the walls that came down, and you can actually fit 100 kids in there. You can do tables back-to-back and you can have groups in the same [room]. . . . When Rob gave his lesson on thesis sentences, I would be there with him with the 50 kids so that I could help him direct the kids into the right direction they needed to be in. Can't do that [in the modules]. Basically the most you can get is 25 students into a room. That's why I wish the wall could come down.

In some instances, Joan appeared to see whole group instruction as a way to eliminate repeated teaching of the same lesson and as a way to give teachers

an opportunity to help colleagues monitor ongoing instruction. This is a type of "team teaching" where two or more teachers are joined together strictly for a single instructional purpose.

Rob agreed that use of the cafeteria for large group activities did have its drawbacks, but felt that the team could work around the scheduling issues. Such juggling of schedules was apparent during the planning of a mock trail project. In order to make the trial meaningful, Rob, Doug, and Joan commented that there needed to be enough students for the jury, judge, defendants and audience. There also needed to be enough time available for students to build their arguments for the mock case.

Since this was Scott's first experience in an interdisciplinary team setting, he was excited to have an adjoining room with Doug. Scott saw this arrangement as a wonderful opportunity for the two of them to implement their environmental unit that integrated science and social studies. Scott explained:

> I think it's going to be great because our two rooms are attached, so the two of us are going to be able to take double blocks of time. Instead of having double periods of 200 minutes, we'll have the kids flow back and forth. Have one of us stay here monitoring the two classrooms and maybe one of us up in the library or in the computer room.

Scott felt that one of the reasons he did not pursue integrated studies when teaching high school was the lack of proximity of his class to other departments. This physical separation made it difficult to work with or to communicate with other teachers.

The Longview Team did not have space issues. Their classrooms were located on the second floor of the main building with all four rooms in close

proximity to each other. Two rooms had a sliding divider between them that provided a large open area when needed. Stacie informed me that they rarely, if ever closed the divider. This would have been difficult since there were projects, books and other educational paraphernalia blocking the open dividers. In addition to the four classrooms, there was a small room off the double room that served as a storage area for costumes used for skits and presentations, students' projects, research materials, and various other items that were piled at random around the room. The team felt that having this extra storage space was necessary since they collected so much "stuff" for their integrated units.

Class Schedules

Integrated units require time for students to explore, to do individual research, to work in cooperative groups, and to sometimes interact with people within the community. When developing units that included activities such as the mock trial or presenting culminating projects large blocks of time were essential. As discussed in Chapter Three, Winding Road Middle School addressed this issue through their scheduled blocks-of-time which gave each team 200 minutes of uninterrupted instructional time.

At the time of this research, the Longview Team was the exception. Last year, like all the other teams in the building, Stacie, John, Jay and Matt had 200 continuous minutes for core subject instruction that included science, social studies, English, and math. However, this school year the administration shortened the Longview team's core block of time leaving them with a 150 minute block of uninterrupted teaching time. This was to allow fifty minutes for

the seventh and eighth grade students each day to attend separate specials such as art and music. In order to address their "split" block of time, the team decided to teach math as a grade specific subject rather than integrating it into the other core subjects with the combined seventh and eighth graders. Therefore, the 150 minute block was focused on English, social studies and science.

Stacie believed that more integration was possible with 200 minute blocks, but she saw math as the one subject that was sometimes difficult to integrate naturally within their units. "We pull math out and we tuck math in when it's not contrived". Stacie went on to say that because of a greater emphasis on content in the school district's strategic plan and the state frameworks, she felt that math most likely would have to be taught as a grade specific discipline in the future.

Another reason the Longview team felt they needed uninterrupted core time was to accomodate their "intense two week format". Half of the students on the team might study forest ecology for two weeks in science while the other half of the class worked on a social studies Native American unit. After two weeks, the students switched. Stacie felt that teaching in this manner gave students more opportunities to study a topic in depth. "We have them [students] for 9 days for 150 minutes. So we more or less have them for four to five weeks of history, if we were say a traditional system." The major premise of their instructional approach was project-based instruction that required large blocks of time for students to work cooperatively to complete projects and presentations.

Roles and Attributes of Team Members

At the time of this research, the Outback and Longview teams were each beginning their second year together which qualified them as "fledgling teams" according to Dickinson and Erb (1997). Each team identified the first year as a year in which members addressed "nuts and bolts" issues. Common to both the Outback and Longview teams in their first year, were issues around management techniques, teaching styles, preferred scheduling and length of time for teaching different units, as well as time to amass resources for their various units and projects. During this second year, with some of the "nuts and bolts" worked out, the focus appeared to be shifting more toward refining curriculum, meeting state standards, responding to the district's strategic plan, and developing new units and reevaluating old ones.

Roles within Teams

What emerged from this portion of my study was a discussion that focused on how individual teachers viewed the specific roles taken on by their teammates while planning integrated units. Nearly all the participants were cognizant of the fact that people took on clear roles and carried those roles throughout the team planning sessions in ways that complemented and supported team members. Examples of these various roles, as expressed by individual teachers, are addressed in this section.

Doug explained the type of roles he felt were important for both team members and for students.

> You need people who will be responsible for good communication with the parents. . . . I mean, that's partly public relations, but it's also the

> networking parents need to have - somebody to contact. You [also] need someone to play the devil's advocate. I think people need to, in a sense intellectualize what they're doing and have somebody take the "contrarian" side so that people think about what it is they they're doing such as do they have all the bases covered and things like that. You need someone to be an advocate for the kids. Somebody has to take a role . . . that's compassionate, someone they can go to if they have a problem. If they don't feel real comfortable with the others, then they know that person is there and it's okay to go talk to them. You also need to have a disciplinarian. . . . Obviously everybody has to carry their own weight and do their job and go out of their way to help others.

In addition to addressing student and parent needs, Joan saw the diversity in her colleagues as a positive way to achieve a balance when designing integrated units. Joan explained how she viewed the task orientations of teammates as follows:

> I think you need to have people with different interests with different ways of thinking about things." Some people are more organized than others. Some people are better public speakers, and others can handle the parents a little bit more diplomatically than others do. Some people don't mind pushing the papers and those types of things. And I think you need to have that type of balance. And that's the kind of balance you have to have in order to do integrated courses and units.

During the interview with Scott, he had difficulty articulating what he felt his role was. "Gee, I'm having a hard time answering that because I've been kind of a passive member the first few months trying to figure what it's all about."

In support of Doug and Joan's views, he did make some observations about how he saw the roles and task orientations of the other team members. He explained his observations in the following:

> Joan is definitely the schedule person. She is really good at times and schedules with a math background. Doug is a great articulator when we have documents to write up or reports to write as a team. He can word things really well. Rob is a good manager.

Even though Scott was new to the team, he felt that the entire team had made him feel "right at home" and had been genuinely interested in his insights about students.

Other participants felt that diversity in knowledge and personal characteristics were essential for creating an interdisciplinary team that would produce curriculum and instructional techniques that were good for middle school students. Even though Matt, John, Stacie, and Jay referred to members' roles around specific tasks, they also appeared to view colleagues in philosophical terms.

Jay made the following comments about his fellow team members in reference to each person's role when developing integrated units.

> I'm probably more the pragmatist which is slightly different from being a realist. John tends to be the visionary. He would like to be able to say, "we can do anything, anything we want." What we need to do is educate the parents, the ideal world. If we educate the parents everything will be "hunky dory". Yep, true and then I come back and go, okay, I understand that, but to be practical about it, while we're educating we need to make sure that we're not going so far overboard that they [parents] become

> alarmed. . . . Matt, being the realists that he is, says well here's the way to educate them. You make connections to the strategic plan. Stacie sometimes takes the visionary role, and sometimes she's the mediator. For example, she's able to sit there and say, "Okay, here's what I hear that's important from your view point."

Jay spoke about how different roles created a balance between the ideal and reality for planning and implementing integrated units. For Jay's team there appeared to be an ongoing struggle between their belief in the effectiveness of integrated curriculum for middle level students and the reality of meeting state and district curriculum standards. Jay explained:

> I think you have to have [specific] roles. John will say, "How many years do we have to have this type of research [integration] before we just say, we're going to do it that way!" I'm the one who will go, "I agree, but at the same time we can't just do it that way. We'll scare the 'bageezus' out of every parent that we have. And then Matt will come in and say, "Obviously the attack on the plan is this . . . He is typically the plan guy. Let's figure out exactly what it is that we have to do and then do it. So I guess, we each have our own little role - "encourager", mediator - those kinds of things.

When speaking about his own role on the team, John's statements coincided with Jay's. John commented on how ideas came to him for an integrated unit that allowed him to see just how these units would evolve during the planning sessions. "All of a sudden if something makes sense to me I can see how the thing would look three blocks down on the planning scale." John

also spoke of his frustration with educational institutions and their lack of acceptance of integrated curriculum.

> Why they're [integrated units] not used more by people in the classroom, I don't know because all the professional literature seems to be saying this is the way we should be headed. Even in our own school district now - the push is still not there. I don't know what we're waiting for or who it's going to come from.

Matt believed that the roles people play come from their strengths. He also felt that roles changed depending on the theme and how that theme related to a teacher's area of expertise. He explained his thinking:

> Somebody needs to have the strength area or focus area being the kids. Another person has to have the strength area, focus area of being the public relations [person], someone has to have the strength and focus to be task master to pull everyone back to task. Another person has to have the strength to be able to see alternatives, to see different ways to do things. Another person needs to be able to say enough is enough, this is big enough - it's good enough, stop. It [role] changes, we all bring to the table different resources, different experiences and so in terms of structuring it [integrated units] we do pretty well in defining our goals, getting our activities in place, developing our culminating experiences, having our rubrics.

A common theme expressed by nearly all of the teachers, was the belief that diversity among team members was essential for the development of integrated units of study and for their work together. Several participants saw the different roles as people acting on areas of strength in ways that benefited

both the team of teachers and the students. For most of the teachers, role diversity was seen as a way to share responsibilities when designing and implementing integrated curriculum.

Personal Attributes for Planning Integrated Units

While most of the teachers believed that role diversity was important when planning integrated units, a majority of them believed that specific personal attributes were needed by everyone on a team as well. Several participants commented on the personal attributes they believed were needed to support the planning and implementation of integrated instruction.

In support of Jay's earlier comments about Stacie's role as an "encourager" and mediator, Stacie made the following statement about the cooperative nature of her fellow team members:

> Yah, I like having us all bounce ideas off of each other. John and I planned the Native American thing without Jay because of proximity and time. [Jay coaches and had away games during the planning of this unit]. It would have been interesting to have Jay's two cents in there.

It would appear that this team had a high level of trust in each other's abilities to develop units and activities and were willing to unquestioningly do their part when it was time to implement a unit. Matt concurred when speaking about the planning of integrated units such as the Native American unit or the Garbology unit.

> For us to be able to do what we do requires a lot more effort and planning and time and energy to pull these things [units] together. So the team functions sort of like the network in which we work. It's the

> support system, it's also the overarching committee that makes the whole thing happen.

Even though team members highly trusted and respected colleagues' professional decisions, Stacie believed that they still had issues to resolve around how team members approached the planning of an integrated unit. Stacie saw that some colleagues liked to work out the details of a unit, especially if the focus was related to their content area, before bringing their ideas to the group. Others, herself included, were more interested in planning as a group and then making it grow into something. Stacie explained how she and Matt differed in their approached unit planning:

> Matt likes to tag team something on his own . . . . I think that sometimes that's not the way I process because I like to see where it came from. I like to be a part of it all. I don't like to miss anything, I don't like to be sick 'cause I might miss something.

Stacie felt that her processing strategies were not always understood by other members of the team. However, she did feel that her team was doing a better job of recognizing processing differences and understanding frustration levels.

Further evidence that particular personal attributes were necessary for effective curriculum planning as a team member came from teacher's responses to the interviews and questionnaires. Key words emerged from these two data sources that further described what participants felt were important personal attributes as well as characteristics of the other team members. Data taken from the questionnaires consistently showed that strong interpersonal skills and a clear work ethic were valued. Figure 4.1 illustrates the personal attributes associated with each of these two areas.

Personal Attributes

Interpersonal Skills	Work Ethic
• open-minded	• puts in additional time
• spontaneous	• prepared/organized
• patient	• share responsibilities
• good communicator	• carries own weight
• sense of humor	
• cooperative	

Figure 4.1. Personal attributes associated with effective planning and implementation of integrated units.

Participants felt that the interpersonal skills listed were necessary to maintain a positive and productive environment when planning instructional activities for students. In order to successfully plan and implement an integrated unit, a team of teachers needed to have similar work habits that worked together in a collaborative fashion.

Another overarching quality that several teachers identified as necessary for effective planning of units was collegial relationships that respected and openly accepted others' ideas. Joan explained her views:

> You have to be able to have different ideas, but when one idea is presented that seems to be the best for the theme, you have to accept that that is the way you're going to do it even though you may not agree with it. . . . [A]nd also you need to respect the way other people think and

> also be accepting of the fact that [maybe] they didn't like what you had to say, but they listened to and felt comfortable enough that it wasn't confrontational.

Joan believed that team members should be able to have a conversation about an instructional issue or a unit topic without either person feeling threatened.

Furthermore, Matt supported Joan's belief that others' ideas should be respected and accepted when he spoke about the importance of coming to a consensus when there were differing views on how a unit should be put together or implemented. He explained his view of collegial acceptance of others' ideas allegorically.

> The hiking analogy works quite well. We have to all agree on where we want to go. If one of us would prefer to go to the mall then that person isn't willing to come aboard and be a part of going to the top of Mt. Washington. Then we have to come back and make a different decision and try to compromise. We are all in it together.

Doug viewed respecting other's ideas as a matter of attitude and looked for ways to help colleagues with units or activities. He explained his feelings this way:

> Look for connections, look for ways to help people if it is an integration thing or before the days of integration, just interdisciplinary types of activities. I want people to care what I care about and I want to care about what they care about. And if people have that kind of attitude then things will work out.

> activities. I want people to care what I care about and I want to care about what they care about. And if people have that kind of attitude then things will work out.

Jay believed that years of working together professionally and personal friendships resulted in the "converse not confront" attitude that helped support positive team interaction. Jay reflected on his and Matt's friendship over the years and how they were able to interact positively in a team setting.

> But he [Matt] and I have a background. We've worked very closely with each other before. He's a personal friend of mine. I can tell him he's full of it, with respect and he'll understand that. And he'll tell me the same thing . . . and I don't take offense at it. And I think the support is also just that we're friends with each other. Stacie and John have worked together since I've been here on the same team. They get the same ideas like sometimes it's scary.

Rob also talked about being able to interact positively with colleagues even when there were disagreements.

> If Joan was complaining about something, I would never say, "Joan, cut it out." I'd listen to her right to the end. Or Doug even, he's a very sensitive guy. And Scott is just light hearted right now. It's supporting each other and validating their concerns.

Rob did feel that on occasion, controversial issues must be addressed directly. In such a situation, Rob felt that team members may see his reaction as not being supportive. Rob shared that he felt he was not being totally supportive of Scott during a videotaped team meeting when Scott wanted to include a section on creationism and evolution in their religion unit. When

observing this particular team meeting there did not appear to be a negative response to Scott's view on a personal level, but concerns were expressed about the issue itself in relation to how the topic of creationism would be accepted within the community. Rob explained:

> The one thing I felt badly about, one of the questions Scott asked this morning was about creationism versus - that boy "whew". That's a very dangerous thing. So I probably sounded a little bit non-supportive of him. But, you can't do it. And I follow up with him later and say, "I'm glad you participated, but oh man that open [creationism] . . . you might as well have the kids get naked. It's going to create the same furor. You just have to open up the doors to them [new teachers] and every time they have a question you have to give them a legitimate answer - something they can do to succeed. . . .

At the same time, Rob believed that team members should be able to openly discuss issues but not take these discussions personally. He stated that there were times when he and Doug have had contradictory views that have led to heated discussions, but never at a personal level.

> Doug, the social studies teacher and I have known each other for 17 years. We fight over issues, never personal but we will get red in the face over the way something should be done, but then as soon as the meeting is over, boom, we're back out joking and laughing. It's just the issues. You have to get people to click together. We click together as a team. We like each other.

Therefore, even though there were disagreements, the ultimate outcomes on both teams appeared to be influenced by what was going to be best for the students.

When a team was productive, members felt that being open to others' ideas was a key component for success. This often required teachers to look at suggestions from colleagues form a professional stance and not take a lack of agreement personally. These teachers also recognized that planning and implementing an integrated unit took a great deal of collaboration among all members of the team and that the responsibility for a unit should not fall to any one person. Such collaboration required a shared responsibility in the form of members taking on different roles within the team structure.

State Frameworks and District Strategic Plan

The state frameworks for this particular state were introduced in 1993. Framework goals and objectives indicated what students should know and be able to do by the end of third, sixth and tenth grade in math, science, language arts, and social studies. By 1994, the state had developed standardized tests in the core subject areas for all students in grades three, six, and ten with the exception of science where the assessment had only been developed for grades six and ten. Test scores from public schools state-wide were published in newspapers throughout the area. Public reporting of each school's performance on these tests created a competitive edge for school districts and pressure for them to do well.

In addition to matching the state frameworks to the existing curriculum, selected teachers at Winding Road Middle School were part of the district's

strategic plan committee. As explained in Chapter Three, work on this plan had been an ongoing process since 1994. Unlike the state frameworks, whose goals and objectives tended to be broad in scope, the district's strategic plan presented goals and objectives in more detail. The performance tasks that were designed for the district's strategic plan had to match the state curriculum frameworks. Therefore, at the present time the teachers at Winding Road Middle School were using the state frameworks to create performance tasks that were part of the overall district strategic plan. The sample shown in Figure 4.2 illustrates how one of the language arts state frameworks in the area of writing corresponds with seventh and eighth grade performance tasks in science and language arts.

Sample Comparison of English Language Arts Standards

State Curriculum Framework Standard: Students will demonstrate the interest and ability to write effectively for a variety of purposes and audiences.

District Performance Task (Grade 7): Research and report on one aspect of the relationship between diet and physical activity (i.e. calories, calcium-iron intake, junk food consumption, eating disorders, carbohydrate loading.)

District Performance Task (Grade 8): Develop a research report to evaluate energy, power, and transportation systems and their impact on people, the environment, culture, and the economy.

Figure 4.2. Sample Comparison of a specific language arts state standard as compared to two performance tasks from the District Strategic Plan.

Several teachers commented that the performance tasks of the strategic plan and the state curriculum framework standards required an enormous amount of specific material to be covered each year. Some team members felt that the vast amount of specific content required in the state frameworks and in the district's strategic plan would inhibit their ability to continue their experiential, in-depth instructional style and focus on themes. Others felt that if the district required integrated units to be taught, then administrators should support teachers who integrate the curriculum when parents questioned the validity of such instruction. Most of these teachers did feel that the frameworks and district strategic plan would force them to be accountable for what they taught and would lead them to closely monitor how the goals of their integrated units matched the state and district guidelines.

John had other concerns about the amount of content and the number of standards that teachers were required to address. He explained that prior to the current curriculum mandates, the district's eighth grade social studies curriculum was basically one page that described the content goals for the year. "The curriculum was done by topics for each decade." With the new state and district requirements, John felt that meeting those standards was extremely complicated and expressed his views in the following:

> Now, I'll tell you what I have to look at. . . . We started out with a base [curriculum] and now all we've done is put overlays on top of it . . . between benchmarks, performance tasks and the state standards. . . . So what was on my plate before was that much [holds hands close together] and now my plate is about [holds hands wide apart].

Matt concurred with John that there was an "incredible amount" of content to be taught. However, he felt the state and district standards could serve as a guide when designing units by helping teachers determine what parts of their units met the standards and what parts did not.

> If we can keep the frameworks, proficiency standards and our strategic plan in the foreground for what we're doing, then we can quickly refer back to them and structure the learning that we've developed to help our kids do well on the state tests.

Jay explained that his team needed to pay particular attention to the frameworks because his team would often concentrate for two weeks on a unit with a science focus and the next two weeks they would teach a unit with a social studies focus. The team felt that parents sometimes misunderstood their intense two week format in thinking that some content areas were not rigorously being addressed. These teachers also believed that hands-on experiential learning was one of the best ways to meet the academic needs of their students. This too was a strategy that parents sometimes saw as lacking in academic rigor.

> If we are going to do this [two week focus on one topic] we'd better make sure that we use the strategic plan as a framework for guiding what it is that we need to accomplish. We reference that document all the time saying . . . this is the curriculum that is written . . . [and] these are the things that need to be covered. This is one of the things I was talking about the other day with Garbology. Because we all believe that we could provide a curriculum for the students based on them having do

> Garbology for two weeks and then having a social studies unit for two weeks we would hit all those things [curriculum goals].

John, among others, felt that the administration was giving mixed messages about the district's acceptance of integrated curriculum. Several teachers felt that on one level the administration agreed that integrated curriculum was the way content should be taught, while on another level the administration had been known to question the validity of such instruction when integration was challenged by parents.

Stacie supported John's contention that the administration seemed to vacillate on their position regarding the merits of integrated curriculum. Stacie implied that the proponents of the strategic plan were not always consistent in their expectations for what they actually wanted the teachers to teach. She felt that the district's move to make each grade level responsible for specific content was incompatible with integrated teaching. She explained:

> The same people that are writing the [strategic] plan, administratively, question what we're doing. . . There are rumors that we're going to have to hold the 7th graders accountable for this and the 8th graders accountable for this and some of those things are so outrageous that even with our creative juices I don't know that we could meld them in a way that is meaningful for the kids.

Stacie felt that the move toward more grade level accountability further indicated the district's desire to have teachers focus on content in isolation.

John also expressed his dilemma about what he felt were unclear expectations from the administration in relation to what and how content should be taught.

> When it would come time for the district to put somebody on display for something innovative, something that was cutting edge, something that was challenging kids meeting the needs of multiple intelligences, they would come to our team and say, "Okay, put your Mt. Washington project on for the State School Board." I don't understand this. We had to justify, we had to fill out more paper work for stuff that we were doing, but now you're coming and saying you're doing it right. . . . Tell the parents that this is what you want as a model. . . .

It appears then that more of the teachers believed that the curriculum standards presented in the state frameworks and the district's strategic plan could be met using curriculum integration. However, John, Stacie, Matt, and Jay felt that in order to effectively implement such instruction there needed to be consistent administrative support for integrated learning. The next section looks more closely at how administrative support and expectations influenced these teachers involvement in integrated instruction.

Administrative Support and Expectations

When participants discussed their views about administrative support for the design and implementation of integrated programs, they indicated that administrators should be advocates for integrated curriculum and that administrators must be educational leaders.

Support for Integrated Programs

Three of the teachers, Stacie, Matt, and Rob, had similar views about administrative support for their integrated programs. When using the general

term administrator, these teachers were referring either to the principal, the superintendent, or the Director of Curriculum. According to these teachers, administrators needed to:

- understand curriculum integration philosophy.
- be able to address concerns from parents about integrated instruction.
- be able to articulate why an integrated unit is appropriate to a team's overall program.
- support a team's teaching methodology
- be familiar with all units taught at both the seventh and eighth grade levels.
- have a clear understanding of what their teachers are trying to achieve.

These teachers strongly believed that integrated curriculum success was directly related to the level of support they received from their building principal and other administrators.

Administrators as Educational Leaders

Seven of the eight core teachers indicated that administrative support went beyond merely understanding the concept of integrated curriculum. They believed that administrators also needed to be educational leaders. According to them, an educational leader understood different teaching and learning styles, was sensitive to the nature of team building, and was open to balanced decision making between principals and their faculty. The following comments highlight some of the key points made by several of the respondents.

Joan recognized that the instructional styles of different team members offered students an opportunity to be placed where they will benefit most. In

order to help students find success, ". . . a principal really needs to know what kind of teachers are on a team, and what kinds of things they [the team] expect from their students" in regards to the type of assignments they require and how those assignments were evaluated."

According to Rob, not only do administrators need to recognize different teaching styles, but they also must take the responsibility to provide teachers with time to work together in order to learn how to collaborate with team members' different teaching styles.

> And they [teachers] need to feel supported and appreciated if they're going the extra mile because as you know it's very simple for me to just shut that door right there and teach - it's what I do best. I've done it all my life - but when you open the door and you start to share things with other teachers you have to get used to their styles.

Presently, interdisciplinary teams at Winding Road Middle School have some autonomy when forming a team. Teachers submit a list of colleagues they feel they can effectively work with in a team setting and a list of teachers they feel they would work with less effectively. The principal then makes the final decision.

Support is also recognizing that it takes an interdisciplinary team three to four years to build relationships that allow the participants or members to delve into issues beyond management of students and schedules. It takes time for teachers to develop integrated units and to feel comfortable teaching content outside of their certification areas. When team members move to other teams, the process must start all over again. Rob spoke about what he called "the divorce" when a previous team which he had been a member was dissolved.

He began by recalling how well team members worked together prior to its being "split-up":

> Whether it was geography, seventh grade geography or in the eighth grade U. S history, we did everything. We did research together, we did projects together, we did performances together. . . . We put George Washington on trial, all kinds of things that just went beautifully together. We did that for years. Our team was really leading the way and then - I call it "the divorce". The principal at the time broke us up. In his mind he was spreading the wealth. We went to other teams and other teams weren't buying what we were doing and so I personally took a few steps backwards, and after nearly four years I'm now rebuilding. It's taken that long.

Most teachers recognized that the administrator's role was very different from that of the teachers'. Doug commented that the administrator looks at curriculum with concern for public relations with parents and the community. These concerns often focus around what is considered academic rigor and what is thought of as "fluff" when designing integrated units. According to Doug, parents expect their children to be prepared for high school work. There was a growing voice in the community that believed the only way to achieve that level of proficiency required a curriculum that was highly content based. It appeared that recent pressure from parents, the state testing, and the district's strategic plan influenced how the administration currently viewed integrated instruction.

Jay spoke to another issue that was sometimes seen as anti-support for integrated instruction, namely, when the implementation of integrated learning became a top-down mandate:

> A number of years ago, when integrated and interdisciplinary started becoming "buzz" words, there was a mandate, "You will do one interdisciplinary unit by Christmas". I think probably some units failed because people felt pressured. I'm sure some people felt either stressed out that change was being imposed upon them when they were not ready for it. Change is a scary thing. These words start coming out and people say, "Cooperative learning, integration, multiple intelligences - do all this in your classroom, portfolio assessment - and do this by Christmas!

Scott made a similar comment about administrative decisions being balanced in a way that there was leadership from the principal while at the same time respecting the input from the teaching staff. "That doesn't mean that it is a democracy, but it doesn't mean it's a kingship either."

Even though Jay saw the new administrators as "still getting a handle" on the school in general, he did believe that they would be supportive of what their team does. He said:

> So, one of Fran's [the new principal] lines is always, "Yup, what you're doing is really good. Let's make sure you communicate it clearly to the parents." And I think that's terrific . . .

Respecting a team's academic or disciplinary decisions was another form of support that Jay felt was needed from administrators. Jay explains his position:

> I think one of the things that they could do certainly for support is to make sure that discussions and decisions aren't made outside our locus of control. I know it's happened in the past. Parents come in and have

> some kind of gripe and have immediately gone over our heads straight to the principal. What I think the administration should do in that case is say, " It appears to me, you should go and speak to the team.

Jay agrees with Rob and Matt that an informed administrator is essential:

> I think the thing that they [the principal and assistant principal] need to work with us and they need to find out; "What exactly are you doing?" "Why are you doing it?" "How are you doing it?" "Why does it work for kids?" "What evidence do you have?" So, if they get a question, then they can show their support by giving an informed answer.

Therefore, it appears that these teachers want administrators to have a depth of knowledge about specific integrated units and to be well informed about what teachers are trying to achieve through the planning and implementation of integrated units.

Jay understands that being a building level administrator is being "in the middle" which requires thoughtful balance when dealing with parents, teachers, and other administrators. In the following, Jay described his perception of what it is like to be a principal:

> You certainly want to be supportive of the teachers. You want to listen to the parents concerns and rightly so, and then you need to bend to the whims of the front office as well. It's not a position that I would ever want to be in. I have great respect for administrators who are able to balance that.

Rob and Stacie both felt that an educational leader encouraged teachers to try new innovations while at the same time required them to be accountable for what they taught. Rob commented that principals should not be afraid to say,

"What is the academic value in this thing [integrated unit]? Where does this fit in the curriculum, topical outlines, commencement goals?" Stacie adds, "Let us experiment, but make us justify it. Let us try things and hold us accountable, but let us try things so that we're not stuck with the status quo." According to these teachers, administrators who are educational leaders know and support what is being taught in classrooms and are advocates for collaborative decision making.

Parental Expectation

Administrative support of teachers was sometimes influenced by how superintendents and principals viewed their responsibility to the community for what content was taught and how it was taught. Comments on parental support centered around two areas: (1) how academic rigor was perceived by parents and (2) parental understanding of a team's purpose and goals for integrated instruction.

In an earlier discussion several teachers felt that the state frameworks and parental concerns would negatively impact the future of integrated teaching. One of the difficulties that Jay saw with administrative support and parental expectations was what he called "layers". He explained:

> The superintendent's line is, "Clients, our parents are our clients and if they have a demand then we should meet that. That's one layer. The next layer is that we have a curriculum that we need to deliver. I believe that if parents want the type of words like academic rigor . . . , a challenge . . . these words get thrown around with very traditional types of definitions attached to them. Academic rigor is textbook learning with a

> test on Friday and challenge is acceleration. That's the way that I perceive it.

Matt, John, Stacie, and Jay felt that parental support could be strengthened when parents had a choice when placing their children on a particular team. They felt that parental choice was paramount for students on their team in order for their program to work. For the Longview Team, choice was essential since the program was to incorporate multi-aged and looping practices where the students would remain with the same team of teachers for two years. The team also believed in flexible scheduling, hands-on learning, and integrated units of study that were not necessarily subject driven as the appropriate academic setting for early adolescents.

Matt commented that the team wanted the parents and students to have a vested interest in what the team was trying to do with integration. They felt that choice was vital to their team's success. When parents made a conscious decision to place their child on the Longview Team, the parents were indicating that they understood what the program was trying to do and that hands-on, project-based integrated learning was best for their child.

> Integration is an idea, education is an idea that has many different ways of going about it. Integration is one way of doing it. For people to have the where-with-all to say, "This is one way of doing it that makes sense for some people, on some days, in some settings. That goes for kids as well as teachers as well as community members. For people to be able to say that with some conviction, having an understanding of what integration entails makes it so the whole idea is supported.

Stacie felt that their eighth grade parents were comfortable with integrated instruction and understood that English, science, social studies, and math were not always taught in isolation or as Stacie put it, "pure science and English". She believed that this level of parental understanding was needed for integrated units to be successful.

Problems arose for the Longview Team when parents decided they no longer wanted to support integration. This lack of support was sometimes based on parents' lack of understanding about the depth of knowledge that integration offered. Matt remarked that parents sometimes rejected integration based on something as simple as "My kid didn't learn the nine planets this year, therefore the education is not working." To avoid such situations Matt and Jay felt that team members and the administration had to be able to articulate clearly what their team stood for in regards to academic and developmental responsive instruction for seventh and eighth graders. Matt expressed his views on this issue with the following:

> If you were to go to a car dealership and they would say this car here is the best, you would expect them to be able to explain why it is that way and how they know that. It's the same way with us. And I think being able to do that [explain their program] has really helped us. Administrators again, need to be able to explain that as well. It shouldn't come down to the team all the time to explain.

The Longview team felt they had been doing a better job explaining their program through informational sessions with both parents and students and continuing to stress to parents the importance of choosing a team that would meet their children's needs.

Summary

Structural components at Winding Road Middle School provided an organizational structure that was conducive to planning and implementing integrated curriculum. A second key component to successful integrated unit planning was the support team members gave to each other through collaboration and open acceptance of others' ideas. Other extrinsic factors that effected the development of an integrated program were the school district's strategic plan and the state frameworks as well as the presence of administrative and parental support.

Impact of Extrinsic Factors

After reviewing the data related to extrinsic factors, it was clear that these elements influenced how and what the teachers in this study taught. In some cases the extrinsic factors were so powerful that no matter what individuals' beliefs were about integrated curriculum for middle school students, it was difficult to escape the impact of these external factors. The extrinsic factors identified in this study contributed to and in some cases detracted from what teachers were able to teach, the amount of time made available for them to plan, and how successful they were with the design and implementation of integrated curriculum.

CHAPTER V

RESEARCH FINDINGS - INTRINSIC FACTORS

The intrinsic factors discussed in this chapter are specific to individual teachers and to the profession they have chosen. These intrinsic factors represent how a teacher defines integrated curriculum and what pedagogical methods are chosen by each individual to implement integrated instruction. An additional intrinsic factor examined was the individual teacher's understanding of the developmental needs of middle level students.

Teachers' Definitions of Integrated Curriculum

As discussed in Chapter Two, it is difficult to find authors, researchers, or teachers who agree on a common definition of curriculum integration. Interview questions related to integrated curriculum revealed a variety of curriculum designs used for instruction. In keeping with Brazee and Capelluti's (1995) definitions of instructional designs, participants' appeared to teach the core subjects in ways that ranged from conventional or separate subject instruction to curriculum coordination that was multidisciplinary/interdisciplinary in nature to more integrated teaching that dissolved the discipline boundaries.

Scott, a former high school science teacher was new to middle level education. He did have middle school general science certification, however, his experience with interdisciplinary team teaching and integration was limited to more conventional, discipline focused instruction at the high school level. At

the time of this study, Scott was teaching science as a separate subject. Scott felt that he needed to observe the interdisciplinary team process before attempting an integrated unit with his colleagues. In the spring, Scott and Doug planned to teach a unit on the environment that would integrate science and social studies. Even though Scott was not integrating with other team members at the time of this study, he felt that he integrated within his own science discipline by including skills and concepts related to math, reading and writing. Scott seemed to have a narrow view regarding the purpose and value of an interdisciplinary team perspective. Scott explained:

> I've spent so much time trying to integrate science with the reading and the writing. I spend so much time correcting reports and try to the best of my ability not to just focus on how clearly they're communicating the science, but the grammar, the paragraph structure. I often wondered, gee, if I could get an English teacher to help me - they would probably do a better job and save me a lot of time and then I could just focus on the science.

At the time of this interview, Scott saw himself primarily as a middle school science teacher. Further evidence of his science focus was his comment that a drawback to the time it took to participate on an interdisciplinary team led to a lack of interaction with other science teachers throughout the building.

Doug's explanation of his early perceptions about integration paralleled Scott's view to some degree. Doug also felt that certain language arts skills were necessary for students to be able to express their ideas and understanding of social studies concepts being studied in his class. Doug reflected on his earlier views:

> I got started because I felt specifically doing research reports that kids could get a lot better benefit from having multiple instructors focusing on different aspects of jobs that are part of the research process. For example, if a kid realizes that the topic sentence or a thesis sentence has to be approved by a couple of teachers then there are multiple points of view that evaluates if something is okay or not. Secondly, if I have help, let's say from an English teacher evaluating the language arts aspect of a written report, that means that in turn I focus more energy on the intellectual arguments, the method of research, sources that are used and those types of things. So integration had just pragmatic benefits for me as a social studies teacher, doing things like research.

Doug's earlier view expressed in this statement suggested collaborative teaching rather than integration of content. Doug went on to explain his current view of integration as a way for teachers to find common threads between and among disciplines. He felt that teachers needed to work together to connect those strands and to share the responsibility for teaching common threads.

Common threads were integrated into themes (i.e. World Religions) and each teacher had the responsibility to address these common threads (i.e. research skills) when teaching content from their own discipline that related to the integrated unit. Doug explained:

> I think research report process where, as an example, kids get the benefit of the math teacher in terms of helping them present a statistical analysis or something. That would be the math teacher working with them [students] on charts, diagrams, or graphs. We have

> traditionally done environmental research reports. The science teacher is involved in the knowledge base part of it.

During a videotaped team meeting Doug, Rob, and Kate explained that research skills were a common area of emphasis for this year's units.

Joan did not see the need to integrate all the disciplines when planning an integrated unit. She believed that curriculum integration can be "just integrating one content area with one other discipline." Joan appeared to use what Brazee and Capelutti (1995) call multidisciplinary instruction where teachers sequence their lessons to correspond to related content being taught in other disciplines. This team of teachers also used elements of what Vars (1993) refers to as a "correlated" curriculuar design where direct instruction is provided for skills that are needed to learn the unit content. Joan taught graphing to correlate with the reporting of data related to the research aspect of the religion unit. As the math teacher, Joan's role was to teach math concepts that students would need to complete their projects such as graphing or statistics. These skills were taught in conjunction with the study of religion but were not necessarily interwoven or blended as Beane (1990) would define integrated studies. It should also be noted that Joan had not been present during all of the team planning sessions for the religion unit.

Further evidence that Joan engaged in multidisciplinary teaching occurred when students needed specific math skills to present their research data, mini lessons were developed to address those concepts. Joan chose to teach her lessons on percentages when the social studies teacher was doing a unit that involved the demographics of other countries. "I could do my percentages during this unit because you're talking about population density

and things like that." She went on to explain her parallel role in a leaf project that was developed to integrate science and geography:

> They did a leaf project and I helped them a little bit on statistical data or mean, averages. I kind of taught that the big word now, here in the middle school is mean, the range, and things like that. Eventually what I'm used for a lot is basically statistical reasoning.

Rob appeared to be in a transitional stage. He viewed himself and his fellow team members as teachers who were experts in their four subject areas -- English, math, science and social studies-- but he also recognized that the real world was not compartmentalized into separate subject areas. He went on to say that content needed to be presented so that students saw connections between and among the disciplines.

> The world does not operate as separate categories. Everything we do is integrated in our lives. If we're sitting and writing a research paper we require a lot of different skills. I think it's [integration] an opportunity for teachers to draw on their expertise and show kids that there is a connection between the disciplines, . . . that they [disciplines] all work together."

Prior to his present team placement, Rob worked with John on a three person team as described in Chapter Three. When Rob and John planned their Journey Through Time unit, they appeared to integrate from what Fogerty (1993) refers to as a "shared" model where teachers from two disciplines look for overlaps in content from each of their disciplines to point out commonalties to their students. Rob tells about teaching with John over ten years ago.

> I started work with a guy named John, he's on the Longview Team. We taught upstairs in a classroom that had a dividing wall. I was the English teacher and he was the social studies teacher. At that time, John and I had this notion that we could teach social studies and English together. It was before it was stylish to break down the walls between the classes. John and I wrote a unit called "Journey Through Time" where kids researched a character in history and then they portrayed that person in a first person narrative. We raised heck with the kids because I did this JFK thing and he played this wild professor. When we got done with this - I'll never forget this - he [John] looked at me right after the kids left and he said, "This is the way to teach school!" We never put up the dividing walls again and we worked together for four years.

For Rob and John, this way of teaching provided a natural connection between social studies and English. These two teachers appeared to believe in what Stevenson (1998) calls "responsible representation of discipline and respectable treatment of subject matter". Rob and John had identified social studies and English concepts that had a natural fit and were essential components of their curricula. Their students were able to "experience" the subject matter through their development of personal portrayals of an historical figure.

Jay seemed to aspire to the Beane (1990) and Stevenson (1998) models of integrated curriculum. He described integration as teaching without the discipline boundaries that are often still present even with multidisciplinary and interdisciplinary instruction. Jay explained interdisciplinary teaching as beginning with a subject area such as English, science or math, and figuring out

how to attach different disciplines together to focus on a unit theme. He defined an integrated unit as one that began with a theme such as Native Americans or Garbology that looked at the impact of waste on the environment and then determined which discipline best fit with the theme or topic of study. In other words, the theme drove the choice of specific content which came from disciplines rather than the emphasis being on which disciplines to fit together.

As a result of Jay's experiences in doing both interdisciplinary and integrated types of units, he found that teachers had strong ties to their disciplines and had difficulty letting go of their specific content areas especially if the subject matter in other disciplines went beyond their comfort zone. He sees this happening in his own team as well.

Stacie also identified with Stevenson and Bean's integrated models. She defined integrated instruction as teaching without single subject boundaries and as being relevant to students' interests and concerns such as studying how things work or environmental issues. Even though she felt integrated curriculum should be designed with these aspects in mind, she did not feel that her team was currently integrating at this level. She attributed some of this to the administrative and community pressures discussed in the previous chapter.

> We haven't hit integration where I'd like to be and I don't know that within our time frame within a public school if we'll ever get there. I think, if we could hit [apply] my definition and have student choice and have boundaries pretty nonexistent which would mean that the district would in some way need to modify its expectation of us which is not going to happen here, then we could plan our year.

Stacie also felt that integration highlighted real life situations and helped students see the connection between what they were studying in school to their current and future lives outside of school.

John believed that in order to present material in an integrated fashion, teachers must make a paradigm shift in their instruction from a traditional content driven and teacher directed approach to more theme centered and teacher as facilitator model. He understood the many pressures created from the district's strategic plan and state frameworks that might make such a shift in thinking difficult. He also commented that in most fields success in the work place requires individuals to perform integrated tasks and therefore the schools have a responsibility to teach in an integrated fashion.

Integrating the skills from the different disciplines appeared to be a common premise or underpinning for designing curriculum which John, Stacie, Jay and Matt all agreed upon. These teachers also agreed that process skills such as observation, inference, following directions, and prediction were transferable skills useful across the disciplines. John talked about skills such as reading, writing, speaking, and problem solving as essential skills that were found in any unit that was designed to integrate the disciplines.

Stacie supported John's comments about transferable skills as she spoke about the Native American unit that her team did each year. During the course of this unit, students were required to incorporate research skills on specific tribes and ultimately to use their writing skills to create a final written report. This project also required students to hone their organization skills as they designed and presented projects as part of the culminating experience. In many cases, these presentation were done with a partner, therefore

collaboration was needed to complete the final project. John believed that when developing integrated units, teachers needed to be aware of the necessary process skills students must have in order to be successful with the thematic unit. "Teachers must be aware of which skills need to be introduced for the first time and which skills need to be refined."

Jay agreed with John and Stacie when talking about process skills and integration. When he thought of integration, he thought about skills first:

> So, I guess what it boils right down to is when I think of integration, I think much more on a skills base rather than the specific content of the topic. It [the topic] might be connected to a certain discipline, but integrating the skills as much as possible is what is most important.

An example of this type of thinking was illustrated in the "Devention" unit that the Longview Team developed with a science focus. In this unit, students had to disassemble such items as an air compressor, alarm clock, or cross country skis and draw the object to scale as well as discuss how they believed the item worked. Matt indicated that this theme allowed "the kids to use their variety of skills, variety of talents, and variety of intelligences in an authentic way." During the Devention unit, Stacie incorporated math skills such as scale along with ratio and converting decimals to percents. Students were required to make scale drawing of their Devention objects to two milliliters of tolerance. Matt indicated that the projects created a collaborative atmosphere where students helped each other to determine how an object worked by examining the parts even though the assignment was to work individually.

Transferring skills from one discipline to another was also important to Joan. Joan saw the ultimate goal of skills instruction as a way to help students

transfer their math knowledge into other areas of research. Joan wanted her students to be able to transfer mathematical applications to the appropriate areas of their research and know how to correctly use the mathematical concepts to represent their data. For example, she described how she helped students transfer graphing skills to their research projects.

> . . . . line graphs are for change over time, bar [graphs] are for comparing two different things and a lot of kids don't know that. Then they have to decide what kind of graph they should use. What I usually do is a lesson on graphs early on at the beginning of the unit so that they have that information when they do their research whether it's geography or science.

Further support for helping students see how skills transferred from one discipline to another was expressed by Jay. Even when Jay was teaching English and Matt was teaching science on a more traditional team, they often got together to discuss how skills spanned across the curriculum. Since Jay used the writing process in his English class, he suggested that Matt use the same process to help students write out their science lab reports. Jay explained:

> Even Matt and I when we were on a much more traditional type of team, I sat down with him and said, "Let me teach you about writing process real quick. This is what you should be having the kids doing." Now am I integrating language arts? Yah, I'm introducing a skill they're going to use in language arts when writing across the curriculum types of stuff, in language arts, in social studies, in science. I sat down and I said, "You don't necessarily need to go "soup to nuts" on this like I would when

they're writing a story, but they should use that same type of skill when writing a science lab.

Embedded in the comments of over half of the teachers' were statements that emphasized the importance of integrated curriculum as teaching that broke down content boundaries in ways that showed students how content was interconnected. Additionally, to many of these educators, teaching without boundaries was a way that the content areas blended and were relevant in the lives of their students.

Understanding the Middle School Student

It was obvious that all participants in this study understood the developmental changes and needs of early adolescents. During the interview process, most comments that related to young adolescent developmental stages centered around their intellectual and social growth.

Social Development

One of the tenets of middle school philosophy is to provide opportunities for early adolescent students to "learn values, skills, and a sense of social responsibility important for citizenship in the United States." (Carnegie Council on Adolescent Development, 1989, p. 45). Five of the participants spoke explicitly about the importance of establishing an environment where students must be accountable for their work and take ownership for their behavior and for their own learning. These opportunities were often incorporated into their units through group projects and presentations.

In order to foster such an environment, Matt felt that he had to let go of what he called the "director" role if students were going to be responsible for making decisions on their own:

> But it's not one of being a director necessarily because then everything comes back to me as a director. And there's no self-initiation, there's no responsibility on the part of the student because of the director.

When an academic or disciplinary situation arose, Stacie felt students should take responsibility for their own actions and be part of the process to find a way to remedy the situation. Stacie commented that taking ownership was not always easy for students. Stacie explained:

> If you ask a kid, sometimes they would just rather have us give the consequence rather than process with them. I think I've had about 5 conversations with kids today on something they need to improve. Sometimes I think they would just rather say, "Give me a detention." "Quit talking to me." We value processing and letting kids in on why we're doing what we're doing either in a punitive or in an academic session or even in a social session.

Rob also felt that part of his job was to help students learn how to resolve problems that go beyond teaching the content. He made reference to conflicts during group work:

> I want kids to solve their own problems. As long as they stick to the issue it's pretty interesting to watch them. I think that is how the kids learn to resolve conflicts. So there is that secondary kind of thing that they're learning. Working in groups is hard, but that is the way

> business is today. People work in teams. Here we are in teams so they have to learn that too.

Jay felt that ownership extended to student choice of partners or other group members when working collaboratively on a project or presentation. He illustrated a typical conservation he might have with a student about working with other students.

> Sometimes I'll have kids say, "You know if you put me in a group, I'm not going to be friends with these people."

His reply:

> I'm not asking you to be their friend. I'm asking you to be a productive member of a group with them. Do you think I'm friends with everybody that I work with? They look at me [and say] "Yah". Okay, this is a bad example because I am friends with people I work with, but everyone in the school, no. Do I have to work with them at times, yes. I'm not saying that we're not friendly, but we're not buddies. I'm not choosing to call them up on the weekends and do things with them. I have to be able to work with them. It's amazing sometimes, their [the students] perspective.

Part of the process of choosing someone to work with involved students being able to articulate why it would be beneficial to collaborate with a particular student. Jay explained the process:

> Typically on a project that is self-directed like this [Native American unit presentations] we let the students choose their partners. And there is a process they have to go through. They have to give us indicators, explanations of why they'll work well together.

Sometimes Jay will say:

> Look, the last time you worked together it wasn't the best thing. I highly recommend you find someone else to work with or I want to see some kind of action plan that will tell me what kinds of things I should be looking for. We tell them that the benefit they get by working together is that they have someone who has the same knowledge base they [have] and can bounce their ideas off of.

He gave examples of how collaboration might work for students. " It just sort of gives them someone to feel connected to". On the other hand if students chose not to work with each other, Jay felt that students needed to take the responsibility to explain why they would rather work alone in an honest way.

> If they chose not to work with each other, they had to give us reasons why they preferred to work alone. And some kids said, "I don't want anyone else ruining my grade." And we would have to sit down with them and say, "Can you think of a more positive way to say that?' And most of the kids could get to the point and say, "I want to be responsible for all my own work. I just think I work better alone, I manage my time better. Some kids are very honest and say, "If I work with someone else, I'm going to fall off task and I won't get my work done." Go figure, they actually know what's good for them.

Matt felt that group work went beyond the presentation of projects such as the Native American unit displays. Asking students to take ownership for their own learning also meant providing learning situations that resembled real world issues and problems. For example, different groups of students represented divisions within a company that that had to deal with a water quality issue. Students had specific roles within the different divisions and had to work as a

team to solve the problem. Matt and other members of the Longview Team, "would talk about how, if you were a person working for a corporation, you would set up this type of grouping to accomplish goals which were very clearly stated to them. This type of activity supported Rob's comment about the team work involved in the decision making process in today's business world. Matt explained that such a simulation "allows the kids to see how in real life things would happen."

Doug, Matt, and John also felt that positive social interactions with peers would build confidence in their students. Doug 's comment was, "I look at personalities before I look at the academics because I do think that the kids do need to get along and they will be able to draw on each others' strengths. During the Devention unit, Matt noticed that, even though students were working on individual project, that they were often assisting fellow students with something mechanical or volunteering their expertise about an object. Matt shared his observations:

> There was collaboration going across the [room]. "Hey could you hold this socket wrench while I hold this screw here." We encouraged that, but we also knew that by having them do it [an object] individually there was going to be the natural group part that formed. Some of the kids that had more experience with engines and motors and things like that were able to shine, able to show other kids what they knew how to do.

John expressed his views on ways to foster positive self esteem in their students. Since the Longview Team was made up of seventh and eighth graders, this situation provided opportunities for the older students to act as

mentors to the incoming seventh graders. John explained one of the team's primary goals:

> One of our goals was to have the eighth graders become role models for the seventh graders - to assimilate them into the team and into our every day routine so that we wouldn't have to do that with kids. That September 1st or whenever the first day of school was would be the 181st day of school rather than the first day.

Intellectual Development

Howard Gardner (1985), psychologist and educator, reminds us that intelligence is not static and fixed at birth but rather influenced profoundly by "individual experiences" in a dynamic way. This is especially relevant to middle school students who are making the transition from concrete thinking to more abstract thought processes. The participants in this study appeared to recognize the importance in providing relevant and meaningful learning experiences for their students. As mentioned in the previous section, several teachers felt that group work should relate to real life issues in order for students to gain the skills needed to be collaborative problem solvers in ways that mirror the real world.

Several participants were strong advocates for providing learning situations that required skills related to real life experiences. These teachers did not discount using the textbook, but felt that other printed materials such as trade books nonfiction reading, and the Internet gave more in-depth information. At the same time hands-on activities, experiential type learning experiences, and exposure to experts in a field were extremely meaningful for their students.

John recalled how his team had incorporated several of these methods for gaining information in their unit planning.

> We had [a student] do an interview with her grandfather who had some Passamaquoddy blood in him which at the same time made him an expert since one of his interests was studying the Abenaki and Passamaquoddy. When we do Garbology, for example, since it will be more issue related, more current event related - chances are the kids will use the Net more. They'll end up using current types of resources like newspapers. One of the skills we're going to integrate from the language arts curriculum is interviewing. We'll probably require that they do at least one interview. And it might be an interview of just mom and her trash habits. What they are going to have to do to find somebody to interview is to take some kind of action and propose some kind of plan. So their research is going to be more like phone skills where they're trying to get their information from a primary source. Call the bookkeeper up at the front office and find out exactly how much money we spend on paper and what kind of paper we buy. Or just go down and ask the secretary here. So, it's finding a balance.

Matt also felt that using people within the community was valuable for their students "because the kids get to see how other people in the community are interested in the same thing. Joan expanded on Matt's comment in relation to using community resources:

> Depending on the topic, sometimes we can find people in town like an archeologist that we invite in at times. We have a lot of people in town like travel agents who provide us with brochures or who will come in and

> share some of their own travel experiences. If they're [students] doing something on agriculture, there's a wealth of knowledge from people in this area alone, but it's from the people. It's not something they're going to get from textbooks or encyclopedias.

In addition to using community resources, Matt explained the value of using hands-on learning especially when teaching science concepts.

> Science by its nature, especially the way we do it at this age is hands-on. Students need to go out there and experience forests, they need to experience soil, they need to experience water, they need to experience streams, they need to experience aquatic invertebrates. It's just the manipulation of those procedures for gathering information that makes it different from just going out and having fun with that. There's a set goal or result that we're hoping to obtain by doing this. Often times it's simply quantifying or giving a number to the conditions that are present in an area. But it's through making it hands-on that the kids really do get engaged. Resources I've used vary incredibly from curriculum guides such as Project Wild and Learning Tree and Aquatic to resources from cooperative extension to trade books to other science materials. There's [points] a whole bookcase full of them.

Matt felt that hands-on and experiential learning had to be challenging as well. He explained such a challenge when his students had to do the scale drawing of their "Devention" object within one to two milliliters of tolerance.

> It was frustrating for them, but it was a good challenge. It allowed them to see math in real life. It would have been really difficult to get into doing

> architectural or engineering type drawings, but the kids were able to learn something about those [from drawing their objects].

Matt went on to say that the "Devention" unit also required students to solve problems and be critical thinkers.

> They were able to do a lot of problem solving. A lot of creative thinking in terms of how this was put together and why it was put together this way. What would be a way you could change it to make it work better, make it work worse? What steps were developed along the way that would have led to this product? So that part of the thinking was really good.

The "Devention" project also integrated fine and gross motor skills. Matt explained:

> There was also the fine and gross motor skills - being able to look at this object and start working either on screws or large bolts, grab a hack saw and saw the ski in half, see what it looks like and why it is honeycombed shaped.

Matt and his teammates felt that the Devention project provided an authentic learning experience and required students to take ownership for their own learning. The unit also provided for social interactions to take place within the context of their learning.

Pedagogy

Pedagogy, or the art of teaching, focused on the ways in which the teachers viewed their function within their educational setting. Primarily, how the teachers view themselves as teaching professionals, their beliefs about the

range of instructional roles they performed, and the expectations they had and how they assessed their students' performance were the clearest indicators of the pedagogical beliefs they held.

Views as Teaching Professionals

As mentioned in earlier sections, prior to the current four member team configuration, Winding Road Middle School had three person teams at both the seventh and eighth grade levels. Seven of the participants had previously taught on three person teams that required them to teach subjects outside of their certified areas. Stacie explained how three member team teaching experiences influenced her and her present team members:

> I don't think we are necessarily afraid of getting out of our comfort zone. In fact, I think that sometimes we're more happy outside of our comfort zone, and we have all been on three person teams at some point. So we have all taught outside of our certified area so that's not even an issue. Last year it was probably October before the kids asked who their history teacher was because they didn't know, because we had blended ourselves so well that they didn't even know who did what.

Stacie felt that teaching outside of one's subject area was a real issue for some people. However, she saw the middle school curriculum as one that anyone could teach. She felt that teachers were intellectually capable of teaching across the disciplines at this level. “Anybody can teach anything here academically - maybe with a little prep. We’re not rocket scientists. We’re not teaching rocket scientist curriculum.”

Jay believed that when educators ceased to identify themselves as content area teachers, more opportunities were possible for instructional flexibility. Jay explained:

> I don't think we're doing anymore integrated work than anyone else in the building. By taking it [a discipline] and saying, I'm no longer an English teacher, then I can teach social studies and I can teach science, then we're able to say, we can do science for two weeks and immerse them in that for two weeks. Then I know we're going to make up the time in some other content later on and say, "Okay, now we're going to do something in social studies - a social studies based unit."

Rob supported Jay's comment:

> "If integration is really important, if it's valued by the school, if it's valued by the team and everybody on the team has to value it [because] you give up a lot of identity as an individual teacher - as an English teacher. I'm a teacher of seventh grade. My specialty happens to be 7th grade English.

Instructional Roles

Most teachers interviewed saw themselves as both instructors and facilitators. This duality was evident when Jay discussed how he and his colleagues prepared students for the Garbology unit. These teachers felt that in order to provide an integrated experience, students needed content knowledge, conceptual understandings, and skills that they could bring to the learning situation. By providing students with a solid knowledge base on a topic in both content and skills, these teachers encouraged their students to be independent

learners as the teachers' roles shifted from instructor to facilitator. John described his reasons for providing background knowledge and why he felt a portion of his teaching role must be instructional:

> I think they need a knowledge base. What common core of knowledge do they need to have to understand, to have success in this unit? If they have never done research before and they don't know how to do a key word search and your project is based on them going out and finding information on their own and creating their own learning . . . then you have to teach them how to do the research.

Joan also felt that her job was to provide students with a common core of knowledge for their independent work, especially for their religion unit. A clear understanding of a concept or skill helped students make informed decisions on their own about which information was pertinent to their particular topic for the unit on World Religions.

Even though Joan emphasized the teaching of all types of graphing with every student, she also wanted them to be able to apply that knowledge. In order to facilitate students' ability to choose the correct type of graph to use to represent their statistical findings for their religion unit, Joan believed that students needed a depth of understanding of graphing first. Scott agreed that students needed content knowledge in order to make connections between subjects by adding, “You've got to focus on certain things in isolation and then go back and make the connections.”

Matt agreed that there were times when he must provide students with information. However his approach differed from Joan's in that Matt generally used guided discovery rather than a more teacher directed instructional

strategy. Through guided discovery, Matt was able to direct students in ways that they were able to solve problems on their own. Matt explained his teaching strategy in this way:

> Oh, yah, there's definitely chunks of information that they need and it's taught mostly through a guided discovery. You know, a series of questions. What do we know about photosynthesis? We know this much, now how do you think that happens? And so it's a series of questions that are posed and we take a bunch of ideas and we open it up and diverge and then converge on one that looks most logical - one that science says is correct. [We] then broaden it back out again. What are the implications of that and then tie it all back together to what does it all mean? Why is this important for us?

Even though Jay believed in guided discovery strategies he also felt that there were times when direct instruction was necessary. He also stated that instructional techniques should be balanced. He explained in the following example related to his team's Native American unit:

> First, the students read a selection from their history text and take notes on it. Then we talked about taking notes - how you take notes in what sort of format. And then there was another article from National Geographic called the "First Americans" that they had to read and take notes on. So there was some direct instruction in that way. We did a general overview of the First Americans, the tribes, what people were generally like. But we're not typically lecture type folks. We do it sometimes, no doubt. Everything in balance.

Doug and Scott also believed that part of their instructional role was to clearly explain to their students the expectations and purposes for studying a topic or designing a project. During a team planning session for the Outback's religion unit, it was decided that the students needed to have a clear picture of what the unit entailed in order to appropriately choose a religion to study. In this way students would be able to determine if there were enough available resources for their chosen topic, what type of information and data they would be expected to include in their report, and how they would be assessed through rubrics and checklists.

Joan explained further:

> Typically while they're in the middle of their religion unit, at some point while they're researching I will do a graphing unit that's just mathematical and then we'll go back and we'll say, "Okay, you have that information and now you're going to use it and apply it to your individual resources and information you have obtained."

In response to how Joan helped students become independent learners through the transfer of knowledge from math to other areas, she adds:

> Well, in the beginning I'm an instructor and then towards the middle I'm more of a mentor. I'm a facilitator that they know they can come to and say, "This is the information I have. This is what I think I'm going to use it for. Is it correct?" or "I don't think I have enough information, is there another . . .? So I really see myself, especially in the mathematical field where I'm a facilitator. I don't do as much instruction, what I do is provide them with the direction in which they need to go to get that information.

Doug concurred with Joan when speaking about instructor, mentor, and facilitator roles. He saw the instructor role as someone who might instruct students on how to obtain needed information for a research report. A mentor "might be involved in taking the notes [from a lecture] and [helping the students] bring the notes to a final draft paper. In the facilitator role, the teacher "might be involved in a hands-on activity, posters, travel brochures."

Just as Joan and Doug helped guide their students to appropriate resources, Matt too felt that his responsibility was to create opportunities for students to acquire knowledge. However, at the same time, he wanted his students to be more self-directed and responsible for their own learning. He explained:

> I try to provide an opportunity, and once that opportunity has been presented, then it's up to the student in many ways to take advantage of it and for me to help them or facilitate them to acquire that knowledge. It's a resource role. But it's not one of being a director necessarily because then everything comes back to me as director. And there's no self-initiation, there's no responsibility on the part of the student because of the director. If I'm the director I have to tell everyone what to do and they don't understand and they come running back to me. When they think they're finished they come running right back to me. Whereas if they're responsible for their own component, then they take that to a logical conclusion and then with some help from myself and the other students, they find out how they could do it as well as they could.

Rob also facilitates students' cooperative group activities in ways that go beyond learning the content. He explains:

> So, I'm the guide on the side, I'm the facilitator. And I'm the decision maker . . . because I want kids to solve their own problems, but there are times when they get into these "pissing" contests. I say, "Okay, let's cut right to the chase, this is the way it's going to be." As long as they stick to the issue it's pretty interesting to watch them. I think that is how the kids learn to resolve conflicts. So there is that secondary kind of thing that they're learning. Working in groups is hard, but that is the way business is today, people work in teams.

Role of the Teacher in Student Assessment

The majority of the teachers interviewed felt that assessment played a key role when planning and implementing integrated units. To some extent, assessment strategies also influenced the teachers' roles in the classroom and helped to guide student expectations. Doug felt that students needed well-defined unit goals and student expectations.

> Kids at this age and I think at any age, need structure. They [students] need to have clearly defined goals before the project begins. If you expect an outcome, it's only fair that the kids know what the outcome is.

This belief that student outcomes had to be well defined was clearly demonstrated during the planning of the Outback team's religion unit. The team decided that all components which pertained to the unit such as written

assignments, checklists for completed work, rubrics, and projects outlines would be given to students prior to introducing the unit.

Scott also believed that students needed specific guidelines such as rubrics and checklists in order to know what was considered quality work. These assessment tools were not rigid to the extent that students were unable to make choices in how they achieved the desired outcomes for the unit. Scott explained how he provided choice and structure at the same time.

> What I'll do is that I'll divide typically a very common rubric, 1/3 of their grade is creativity, 1/3 of their grade is content, 1/3 is presentation. Then within that I'll kind of put down on a checklist: Here are some things you can do to earn creativity points, here's things you can do for content points, here's things to do for presentation points and you're not required to do them all and you're not limited to my suggestions. I'll always put "other" at the bottom.

Jay's team also used a number of rubrics to assess assignments and projects. Jay and other members of his team saw value in having students help develop the rubrics for presentations and projects in what they referred to as "quality indicators". (See Appendix E) Stacie explained that during the previous year's Native American unit, the teachers determined the criteria for quality and presented the rubrics to the students. What they found was that students' did not have ownership of those quality indicators, therefore were not invested in their projects as much as the Longview Team had hoped. When the team evaluated the success of the unit they recognized that the lack of student ownership could have been related to the lack student input. As a result, the Longview Team decided to work collaboratively with their students to develop a

set of "quality indicators" that both the teachers and students felt were fair and representative of quality work.

Jay, Stacie, John, and Matt also used rubrics for student self-assessment. John commented that, "[W]e use rubrics a lot on our team for almost everything that we do. There is a lot of self-assessment that they do." Jay felt that self-assessment was important, but that most students' from other teams were unfamiliar with the process. He explained.

> Every homework assignment they [students] fill in a simple work rubric. I see other kids from other teams say, "What are you doing." Our students will respond, "I'm assessing my own work." A common response is, "Isn't that the teacher's job? Our students will often comment, "Yah, but on our team we do things differently.

Jay did point out that different did not mean better, only different.

Matt, Stacie, and Jay also spoke about choice and providing ways for students to appreciate what fellow classmates had accomplished. Stacie explained how these concepts were implemented in their Native American Inter-Tribal projects.

> They could do a diorama, skit, model, illustration, painting, mural, map, cook, music. We gave them a list of components and the only requirement we had was that they had a map to show the travel area and they would do that with their partner. We just asked them to keep in mind that they needed variety and had to consider what it was they wanted to share and what they would want the other kids to learn.

Peer appreciation of other students' work was also mentioned by Matt when he spoke about what they called their "Devention Convention." Matt explained:

> There were presentations - kind of a science fair type presentation where we just called it a "Devention Convention." The kids presented their findings to their peers and said, "Okay, this is what we found out about this object." This was neat because the kids were able to act as co-workers working diligently taking these things apart. Often times they had greater interest in what the other people were doing than in their own projects.

When asked how their objectives for the Native American unit were assessed, Stacie felt that traditional tests would not be appropriate or relevant for this unit. She believed that a truer picture of what the students had learned could be observed through products and through discussions or "oral shares". She explained her feelings:

> [Objectives are met] through the products and through an oral share that has to do with the history of the tribe. They have to talk about how the tribes lost their lands eventually to the aggressive white person. They could show us through one of their products or they could share it orally. I don't really see a standard test on the horizon for this. I don't see that as a measurement of what they are learning in a real relevant way. There may be a couple of things that we want everyone to learn that is the same, but I think we are going to see them anyway in their displays that they are going to share with us orally. They have five products. Anything [product] that doesn't share the information we hope they covered, is fair game for part of our oral share. At least you would be able to have some kind of conversation about it.

Stacie's remarks about traditional assessment were supported by Jay's comments. He stated:

> I'm not going to sit them down and give them three generic questions saying, "What is your tribe and how did they live?", "How did they lose their land to the white man?" and "What were the roles of the men, women, and children." In three short essays, write those answers for me. Life isn't like that. High school is like that. College is like that, but life isn't like that!

John agreed with Matt's views of how high schools and colleges expected content to be assessed. He also felt that often today's middle schools were still following the high school model. These comments reflect John's earlier remarks and concern about the district's push for more content-driven instruction at the middle level. He explained his thinking on this subject:

> I think most people in our building would disagree with me, but I don't think it is really important what area we're teaching them [students], what topics we're covering as much as how we're doing it. If we can have top notch skills for these kids when they leave to go to high school in language arts and in what I would call problem solving or math then no matter what topics we taught them in science or social studies they would be ready for any kind of learning. I think that eventually, when they do get to a certain point in high school, there has to be some more specialization. Our model in middle school is still based on what the high school wants us to do and the high school is based in what the colleges have told them for centuries to do. We haven't really changed.

Summary

Participants in this study defined integrated curriculum in a variety of ways. Levels of integration ranged from a multidisciplinary approach which continued to clearly define each discipline as it related to a theme to more integrated instruction that blurred the discipline boundaries and let the theme determine the content areas to be studied.

Nearly all of the teachers understood that early adolescence was a time filled with many developmental changes. In order to meet the social and cognitive challenges of pubescence, partner activities, cooperative activities, and various other ways to foster collaboration as well as time for individual assignments and choice are necessary. The teachers' pedagogical beliefs showed that the ultimate goal for teaching young adolescent students was to create learning environments that prepared their students to take ownership for their own learning as well as to learn to solve problems collaboratively.

Impact of Intrinsic Factors

Many of the comments made by these teachers clearly showed their dedication to creating learning experiences for their early adolescent students that exemplified middle school practices. Each individual's professional career was shaped by both their intrinsic beliefs about integrated curriculum, young adolescent students, and pedagogy and the extrinsic factors imposed on them from the district, their colleagues, and from the community. How teachers responded to extrinsic factors depended upon the intrinsic beliefs they held and brought to this educational setting. These teachers sought to provide a balance between the state's, the district's, and the community's expectations for

academic success and their own understanding of the social and intellectual developmental needs of young adolescent students.

CHAPTER VI

SUMMARY AND DISCUSSION

The purposes of this qualitative-naturalistic study were two fold: (1) to attempt to identify the professional beliefs of middle school educators who were engaged in integrated curriculum and (2) to seek to clarify the conditions that support the implementation of curriculum integration. Both of these components were identified as factors that contributed to the design and implementation of integrated curriculum at the middle school level.

Data were collected through individual interviews and questionnaires, and through videotaped recordings of team planning sessions carried out by the investigator. Results from cross-case analysis of the interview questions and individual questionnaires were classified according to extrinsic factors or conditions beyond the control of the teachers and intrinsic factors or beliefs inherent within the individual respondents.

Participants included nine middle school educators and one student teacher who were members of two different interdisciplinary teams. The five members of the Outback Team taught a heterogeneous group of approximately 100 seventh graders. Whereas, the four teachers and one pre-service teacher on the Longview Team taught a multi-aged group of 100 heterogeneously grouped seventh and eighth grade students. Both teams were in a single rural, New England middle school that had been in existence since the 1980s.

Both the Longview and Outback team members were committed to middle level education and to the developmental needs of their students. Even in the short amount of time I spent with this group of teachers, it was evident that no two teams are exactly alike nor do any two teachers view teaching and learning in the same way. Although both teams designed integrated units around themes such as world religions, Garbology and other environmental issues, each team was distinct in the way they planned integrated units. What I observed was a group of middle level educators who were committed to integrated instruction, but who approached its development in different ways.

The Outback Team appeared to be more structured in their approach to organizing assignments and assessment tools related to unit development. Due dates for assignments and projects were established prior to teaching the unit and all the necessary forms for their research and other activities were given to the students before the unit began.

On the other hand the Longview Team appeared to be more fluid in their approach to unit planning. This may be partly due to their practice of beginning the planning of a new unit while completing one in progress. Team meetings seemed to be a time to check student progress and to evaluate the amount of time needed to complete the unit. Unit planning appeared to be an act in progress rather than a fully planned set of activities and lessons that preceded the implementation of the unit.

Even though the methods varied when planning thematic units, both teams wanted their students to understand how disciplines were connected in meaningful ways. According to Brazee and Capellti's (1995) continuum of curricular designs, each of these teams appeared to be in the process of

approaching fully integrated curriculum, however, in different ways and at different places along the curricular design continuum. Some thematic units such as Longview's Garboloby unit appeared to be on the continuum discussed in Chapter Two between multidisciplinary/interdisciplinary and full integration, while the Outback team's integrated World Religion unit fell closer to a multidisciplinary/interdisciplinary or a fused design (Vars, 1993).

Even though I was only able to observe the discussions and planning sessions focused on one unit for each team, it appeared that the level of integration actually depended, in part, on the particular unit theme being carried out by the team. The subjects integrated would be determined by the content, the skills and the conceptual understandings the teachers believed were needed to complete projects, presentations, and other assignments. For one team, space was sometimes an issue and for the other team, time was sometimes a factor in what activity and components of a unit could be planned and implemented.

Summary of Extrinsic Factors

During the interviews all participants indicated that common planning times, scheduled blocks-of-time, and classroom location were necessary in order to implement integrated curriculum. Furthermore, the responses from the interviews indicated that such structural components had been in place at Winding Road Middle School for a number of years and for the most part were working well.

For these teachers, effective planning of integrated instruction also required support from each team member in the form of roles taken on within

the team structure. Participants' responses lead to the categorization of the roles into five main categories. These roles were identified by the investigator as shown in Figure 6.1.

Roles Performed Within Interdisciplinary Teams

- **manager** or the person who keeps the group on task, monitors progress, and keeps things organized.
- **pragmatists** or the person who sees the practical application of the team's integrated unit.
- **visionary** or idealists who realizes what is possible as seen through the research and has the vision to see alternative approaches to their unit planning.
- **communicator** or the public relations person who has the skills to work with parents and is able to articulate ideas through written and oral communication.
- **encourager/mentor** or the person who validates colleagues ideas.

Figure 6.1. Roles taken on within the team structure when designing integrated curriculum

These different roles that teachers brought to the planning sessions allowed them to work from their strengths and to take on the role that was comfortable for them. This created a collaborative environment in which team members drew on each other's strengths and shared responsibilities to plan integrated curriculum units. Some participants believed that different roles created a balance between those members who envisioned the ideal integrated

unit with those who saw the reality of its implementation. It appears from this data that in order to create an integrated learning environment, teams must be made up of members who are both visionary and practical.

Strong interpersonal skills and clear organized work habits were also frequently mentioned as necessary characteristics for participants in team planning. In addition, many of the participants believed that open-mindedness, spontaneity, patience, ability to communicate, sense of humor, and cooperativeness created a collaborative and positive atmosphere. A number of teachers also understood that effective work related habits were essential as well as being prepared and organized with resources, forms, and any other necessary materials. These teachers also indicated that shared responsibilities made an important contribution to the team's work.

Trust and acceptance of teammates ideas and knowledge of one's own subject content were also important for participation on a team. Often teachers carried out other team members ideas when actually teaching an integrated unit. These teachers, therefore depend upon each other's content knowledge when they are asked to implement an integrated unit.

Most of the teachers believed that support for integrated curriculum development had to go beyond support from team members. Support also had to come from the administration. Four of the participants felt strongly that a supportive principal should be able to articulate why integrated curriculum was appropriate for the developmental needs of early adolescent students. They believed that an administrator also needed to have an implicit understanding of what teachers were trying to achieve through their curriculum. They felt strongly that if parents challenged the value of certain integrated units, administrators

had a responsibility to support the teachers' professional decisions to teach the unit.

Most of the participants felt the district strategic plan and the state curriculum frameworks were designed to have an impact on instruction across grade levels. Because documents were indicators of what the state and the district expected students to know and be able to do at specific grade levels, the teachers paid attention to what the documents proposed and felt they needed to incorporate those standards and performance tasks into their teaching.

However, even though the teachers understood the need to match the state frameworks with their integrated units, four of the participants felt that the amount of content that the strategic plan and the frameworks required for the middle level would lead to a return of more single discipline instruction. Several of these teachers were concerned that the frameworks might actually threaten their efforts with integrated curriculum. Even though some teachers felt that integrated instruction they had done was supported in the district strategic plan, such instruction was not always supported when challenged by parents. A number of the participants believed that the role integrated curriculum plays in meeting curriculum standards is not always supported by the administration.

Several teachers commented that parental expectations were a reflection of the state test scores being published in local and state-wide newspapers. Comments made by over half of the participants, suggested that many parents of students at Winding Road Middle School were very concerned about their children's test scores in social studies, math, science, and language arts and how they compared to students throughout the state. Many of the teachers also believed that parents equated academic rigor in school programs with high test

scores. Several teachers believed that the parents thought a return to more content specific instruction and less integration across disciplines would lead to higher student test scores. These same teachers believed that parents had the misconception that integrated instruction meant merely fun activities or "fluff" and that they did not realize the depth to which the theme focus of integrated curriculum addressed content, the state curriculum frameworks, and the district strategic plan.

Summary of Intrinsic Factors

Attempting to define curriculum integration is a difficult task. There are many curriculum specialists who have their own interpretation of what it means to integrate across the curriculum. The teachers on these two teams held a range of working definitions as well. A number of teachers used terminology that emphasized drawing connections between and among disciplines while others explained integration as a way for teachers to find common threads between and among content areas. One teacher believed that it was not necessary to integrate all the core subjects at one time and that other content areas could be brought into the unit as needed. Several teachers explained integration as teaching without the discipline boundaries and that integrated instruction provided learning situations that resembled real world issues and problems.

When observing the Longview and Outback teams plan units, the teachers most often in engaged in discussions on instructional methods, grouping strategies, and student choice of assignments. Student assessment was also a key issue discussed during team planning sessions, even though

assessment tools varied between the teams from student generated rubrics to teacher initiated checklists. Both teams discussed intended student outcomes for activities and projects related to the integrated units. Scheduling issues were another major concern for everyone. The teams often had to work around special school programs, school vacations, and other projects already in progress to determine daily teaching schedules and due dates for final projects.

Pedagogy varied among individuals in this study. However, most of these teachers believed that the transfer of knowledge from one content area to another helped students recognize the relationships among the disciplines. Others believed that process skills such as observation, inference, prediction, and following directions were essential for studying any discipline, and especially necessary for integrated instruction. These teachers also believed that the transfer of process skills was more than a cognitive exercise for their students. They believed these process skills are crucial for collaboration, problem solving, and critical thinking both in the classroom and in real-life situations. The teachers also believed the process skills are easily taught and reinforced through integrated curriculum.

A number of teachers on both teams emphasized the need for students to have sufficient knowledge in the content areas to carry out integrated curriculum. They believed their role as discipline-based specialists is to develop content knowledge and understandings in order for their students have greater opportunities for overall success with integrated curriculum. Informed decisions based upon knowledge related to a discipline, led students to higher level thinking through the application of skills and content knowledge.

The participants' individual understanding of early adolescent developmental needs was another factor that influenced how integrated curriculum was designed. During the interviews and observations of team planning sessions, it was noted that the participants often focused on the social and the intellectual needs of their students. Figure 6.2, highlights a number of pedagogical choices which the teachers believed fostered social and intellectual development in early adolescent students when engaging in integrated curriculum. The pedagogical beliefs of these teachers are

Pedagogy for the Early Adolescent Student

- establish an environment where students must be accountable for their work and take ownership for their behavior.
- encourage students to solve their own problems.
- foster student collaboration to enhance positive social interaction with peers
    - builds confidence
    - students can draw in each others' strengths
- address more complex levels of thinking through relevant and meaningful learning experiences
    - group work that relates to real life issues
    - hands-on activities
    - experiential learning
- go beyond the textbook
    - exposure to experts in their field
    - trade books
    - nonfiction reading
    - Internet and other technological resources

Figure 6.2. Areas that teachers emphasis related to the benefits of integrated curriculum for early adolescent social and cognitive development.

closely related to Arnold's (1993) five principles that empower early adolescents to engage in positive learning experiences as found in Chapter Two. The data for Figure 6.2 was collected from both the interviews and the questionnaires.

Implications of the Study

The insights gained from this study came primarily from the individual interviews conducted by the investigator. To further clarify responses made by the participants during the interviews, the questionnaires and videotaped planning sessions were also reviewed. Data analysis from these three sources identified extrinsic and intrinsic factors that shaped the professional beliefs of middle level educators who integrate the curriculum and identified the conditions that support curriculum integration (see Figure 3.2 on page 63).

The research review and the data itself led to the following implications:

1. In order to maintain a balanced team effort in the collaborative process of integrated unit planning, there needs to be a variety of roles and contrasting strengths within interdisciplinary teams (Doda, 1992). The teachers in this study demonstrated such diversity in the roles they brought to integrated unit planning sessions as supported in the research. Roles appeared to emerge from the strengths inherent within each individual. Team members depended upon each other's strengths and understood how their own roles contributed to integrated unit planning.

Since a collaborative team effort depends upon the diverse strengths of team members within the realities of a school setting, teacher education programs need to consider how they structure courses and practicum

experiences. In order for students to recognize their own strengths and to understand how these strengths add to a team effort, pre-service middle level teachers need opportunities to work collaboratively on their in class assignments as well as in their field-based experiences. Students in middle school level teacher training programs must be active learners in the process of discovering who they are as teachers and how they see their role within a team setting. Therefore, projects and presentations should be structured in ways that require creative and collaborative problem solving. When applying for their first teaching job, pre-service teachers must be able to articulate their strengths and identify the ways in which they can make a contribution to an interdisciplinary team.

2. Even though specific questions regarding state and district standards were not in the original interview questions, concerns about the impact of the state frameworks and the district strategic plan on curriculum and instruction were pervasive throughout the interview responses. The data indicated that even though all of these teachers believed that state and district standards helped guide curriculum and instruction, some teachers believed that the amount of content expected to be taught as indicated in these documents would lead to a return to discipline specific instruction.

These are powerful extrinsic factors that challenge the intrinsic beliefs of these teachers and have raised the following questions. "What will the state and district standards mean for the future of integrated curriculum in middle schools?" "Will the emphasis on content specific material hinder the future development of integrated instruction and how will this latest educational reform impact the best practices for middle level students?"

The data in this study suggests that teachers are not effectively conveying what they inherently believe about integrated instruction to those who oppose its implementation. If teachers strongly believe that integrated curriculum is the most effective way to learn about a topic in depth, to meet state and district standards, and to address the developmental needs of their students then it is incumbent upon them to clarify proposed goals and student outcomes to parents and to the administration. Teachers must be active, not passive advocates for integrated curriculum. They must take action to communicate and educate parents and administrators to the benefits of integrated learning.

The study also suggests that school districts and states should make more of an effort to provide concrete examples of how to integrate standards from a variety of disciplines into units of instructional study. It would be extremely beneficial to interdisciplinary teams to have access to curriculum guides that gave specific examples of how to integrate effective content from a variety of disciplines as connected to the state standards. A published curriculum based on district needs would give educators a model from which to work when constructing their own integrated units.

3. The review of literature revealed numerous definitions related to integrated curriculum (Beane, 1990; Vars, 1993; Brazee and Capelluti, 1995). Among the participants in this study, there were numerous interpretations of the term integration as applied to their instructional methods. Further evidence showed that these teachers did not always use the same level of integration when planning different integrated units. Some teachers used what Vars (1993) calls correlated curriculum adjusting the sequence in one course to fit

the sequence in another. Other teachers used Brazee and Capelluti's (1995) model where students use concepts, skills and content from across the disciplines to pursue topics and themes. In addition, the study implied that the teachers' personal definition and understanding of integrated curriculum reflected the degree to which integration was used in their classrooms. Schumacher (1995) reminds us that even teams identified as engaging in the most integration will, at times, teach at what he refers to as lower levels of integrated instruction.

The data collected through this study indicates that teacher preparation programs have a responsibility to provide pre-service teachers with many opportunities to study both the design and the implementation of a variety of integrated models of instruction. Through more practical experiences with integrated curriculum, future teachers will be better prepared to meet the academic and social needs of their middle level students. This indicates that college professors who teach in middle school programs must model integrated curriculum techniques as much as possible. Assignments given should require students to see the connections among content areas and to transfer skills learned in other disciplines. By experiencing integrated learning in their college courses, pre-service middle school teachers will be better able to connect integration theory to classroom instruction.

Suggestions for Further Research

Similar studies are needed to expand the data that demonstrates the factors that influence the design and implementation of integrated curriculum in middle schools. Due to the limited number of participants and the short amount

of time available to observe team meetings, further research would help determine if factors identified in this study which shape the professional beliefs of middle level educators are consistent with the beliefs of other middle level teachers.

Because the data were collected only from the teachers, the investigator was unable to observe how the integrated units were implemented in the classroom nor how the students reacted to projects and assignments. If this study were to be replicated, classroom observations should be included as part of the research design. By looking at the interactions which take place among the students, the students and the teachers, and with the content of the unit, the researcher would have a clearer understanding of how the professional beliefs of middle levels educators are transferred into actual teaching practices.

The results of this study suggest further research that would explore the following questions that address both intrinsic and extrinsic factors:

1. What changes do teacher preparation programs need to make to insure that pre-service middle school teachers have the skills necessary to design and implement integrated curriculum that meets both state and district standards and the developmental needs of early adolescent students?
2. How should middle level teacher preparation programs assist pre-service teachers in determining how to identify and use individual strengths to become a successful collaborative member of an interdisciplinary team.

3. How do middle level teacher preparation programs influence the degree to which novice middle level educators engage in designing and implementing integrated curriculum with other team members?
4. How do curriculum state frameworks and state-wide testing for elementary, middle school, and high school students influence how curriculum is designed and implemented?
5. What changes are necessary in school leadership and public policy for curriculum integration to take place?
6. In what ways do school organizational structures (physical space, class schedules, and common team planning time) lead to the loss of or the encouragement of integrated curriculum in school programs?

REFERENCES

Aiken, W. (1942). The story of the Eight Year Study. New York: Harper & Row.

Alexander, W. M., Williams, E. L, Compton, M., Hines, V. A., Prescott, D., & Kealy, R. (1969). The emergent middle school, (2nd ed.). New York: Holt, Rinehart and Winston.

Alexander, W. M. & McEwin, K. (1989). Schools in the middle: Status and progress. Columbus, OH: National Middle School Association.

Anderson, R. (1995). Curriculum reform: Dilemmas and promise. Phi Delta Kappan,77 (1), 33-36.

Andrus, E. (1995). Service learning and middle school students: The perfect fit. In Siu-Runyan, Y. & Faircloth, C. V. (Eds.). Beyond separate subjects: Integrative learning at the middle level (pp. 167-187).

Arhar, J. M. (1997). The effects of interdisciplinary teaming on teachers and students. In Irvin, J. L. (Ed.). What current research says to the middle level practitioner (pp. 49-56).

Arnold, J. (1993, Fall). A curriculum to empower young adolescents. Midpoints 4(1), 1-11.

Arnold, J. & Stevenson, C. (1998). Teachers' teaming handbook: A middle level planning guide. Fort Worth: Harcourt Brace College Publishers.

Beane, J. A. (1990). A middle school curriculum: From rhetoric to reality. Columbus, OH: National Middle School Association.

Beane, J. A. (1997). Curriculum integration: Designing the core of democratic education. New York: Teachers College Press.

Bogdan, R. C. & Biklen, S. K. (1992). Qualitative research for education: An introduction to theory and methods (2nd ed.). Boston: Allyn and Bacon.

Brazee, E. N. & Capelluti, J. (1995). Dissolving boundaries toward an integrative curriculum. Columbus, OH: National Middle School Association.

Brubaker, D. L. (1994). Creative curriculum leadership. Thousand Oaks, CA: Corwin Press.

Caine, R. N. and Caine, G. (1994). Making connections: Teaching and the human brain. Alexandria, VA: Association of Supervision and Curriculum Design.

Canady, R. & Rettig, M. (1995). The power of innovative scheduling. EducationalLeadership, 53 (3), 4-10.

Carnegie Council on Adolescent Development. (1989). Turning points: Preparing American youth for the 21st century. New York: Carnegie Corporation.

Conant, J. B. (1960). Education in the junior high school years. Princeton, NJ: Educational Testing Service.

Dalheim, M. (Ed.). (1994). Time strategies . National Education Association of the United States.

Darling-Hammond, L. (1993). Reframing the school reform agenda: Developing capacity for school transformation. Phi Delta Kappan, 74(10), 752-761.

Dewey, J. (1902). The child and the curriculum. Chicago: The University of Chicago.

Dewey, J. (1915). The school and society (rev. ed.) Chicago: University of Chicago Press.

Dickinson, T. S. and Erb, T. O. (1997). We gain more than we give: Teaming in middle schools. Columbus, OH: National Middle School Association.

Doda, N. M. (1984). Teacher perspectives and practices in two organizationally different middle schools (Doctoral dissertation, University of Florida, 1984). Dissertation Abstracts International, 45, 3058-A.

Doda, N. M. (1992). Teaming: Its burdens and its blessings. In J. Lounsbury (Ed.), Connecting the curriculum through interdisciplinary instruction (pp. 45-55). Columbus, OH: National Middle School Association.

Doll, R. C. (1996). Curriculum improvement: Decision making and process (9th ed.). Boston: Allyn and Bacon.

Donahoe, T. (1993). Finding the way: Structure, time and culture in school improvement. Phi Delta Kappan, 75(4), 298-305.

Drake, S. M. (1993). Planning integrated curriculum: The call to adventure. Alexandria, VA: Association for Supervision and Curriculum Development.

Eastin, D. (1999). Getting to the heart of the matter: Education in the 21st century. In D. D. Marsh (Ed.) ASCD yearbook: Preparing our schools for the 21st century (pp. 13-24). Alexandria, VA: Association for Supervision and Curriculum Development.

Eichhorn, D. (1966). The middle school. New York: The Center for Applied Research in Education, Inc.

Ellis, A. K. & Stuen, C. J. (1998). The interdisciplinary curriculum. Raleigh, NC: Bookwrights.

Epstein, J. L & Mac Iver, D. J. (1990). Education in the middle grades: National practices and trends. Columbus: National Middle School Association.

Erb, T. O. & Doda, N. M. (1989). Team organization: Promise - practice and possibilities. Washington, D. C: National Education Association.

Erickson, H. L. (1995). Stirring the head, heart, and soul: Redefining curriculum and instruction. Thousand Oaks, CA: Corwin Press.

Erickson, H. L. (1998). Concept-based curriculum and instruction: Teaching beyond the facts. Thousand Oaks, CA: Corwin Press, Inc.

Felner, R. D., Jackson, A. W., Kasak, D., Mulhall, P., Brand, S., & Flowers, N. (1997). The impact of school reform for the middle years: Longitudinal study of a network engaged in *Turning Points* - based comprehensive school transformation. Phi Delta Kappan, 78 (7), 528-532 & 541-550.

Fogarty, R. (1993). Ten ways to integrate the curriculum. In R. Fogarty (Ed.), Integrating the curriculum: A collection (pp. 101-110). Palatine, IL: IRI/Skylight.

Fried, R. (1995). The passionate teacher. Boston: Beacon Press.

Fullan, M. G. (1990). Staff development, innovation, and institutional development. In Changing school culture through staff development: The 1990 ASCD Yearbook, 3-25.

Fullan, M. G. (1992). Visions that blind. Educational Leadership, 49(5), 19-22.

Fullan, M. G. & Miles, M. (1992). Getting reform right: What works and what doesn't. Phi Delta Kappan, 73(10), 745-752.

Gardner, H. (1985). Frames of Mind: The Theory of Multiple Intelligences. New York: Basic Books.

Garvin, J. P. (1995, March). Indicators of a productive middle school. Paper presented at the meeting of the New England League of Middle Schools, Providence, RI.

Gatewood, T. E. & Dilg, C. A. (1975). The middle school we need: A report from the ASCD working group on the emerging adolescent learner. Washington, D. C.: Association for Supervision and Curriculum Development.

Glasser, B. G. & Strauss, A. L. (1967). Discovery of Grounded Theory: Strategies for Qualitative Research. Chicago: Aldine.

George, P. S. & Alexander, W. M. (1993). The exemplary middle school. Fort Worth, TX: Harcourt Brace College Publishers.

George, P. S. & Shewey, K. (1994). New evidence for the middle school. Columbus,OH: National Middle School Association.

George, P., Stevenson, C., Thomason, J. & Beane, J. (1992). The middle school and beyond. Alexandria, VA: Association for Supervision and Curriculum Development.

Glickman, C. D., Lunsford, B. F., & Szuminski, K. A. (1995). Co-reform as an approach to change in education: The origin of revolution. In Educating teachers for leadership and change: Teacher education yearbook III. Thousand Oaks, CA: Corwin Press.

Goodlad, J. I (1984). A place called school: Prospects for the future. New York: McGraw-Hill.

Grambs, J. D. Noyce, C. G., & Robertson, J. (1961). The junior high school we need. Washington, D. C.: Association for Supervision and Curriculum Development.

Guba, E. G. (1978). Toward a methodology of naturalistic inquiry in educational evaluation. CSE Monograph Series in Evaluation, 8. Los Angeles: Center for the Study of Evaluation, University of California.

Gwynn, J. and Chase, J. (1969). Curriculum principles and social trends (4th ed.). New York: Macmillan.

Hall, G. E., & Hord, S. M. (1984). Change in schools: Facilitating the process. Albany, NY: State University of New York.

Hessong R. and Weeks, T. (1991). Introduction to the foundation of education (2nd Ed.). New York: Macmillan.

Irvin, J. L. (1992). Developmentally appropriate instruction: The heart of the middle school. Transforming middle level education: Perspectives and possibilities (pp. 295-313). Boston: Allyn and Bacon.

Irvin, J. L (Ed.). (1997). What current research says to the middle level practitioner. Columbus, OH: National Middle School Association.

Jacobs, H. H. (1989). Interdisciplinary curriculum: Design and implementation. Alexandria, VA: Association for Supervision and Curriculum Development.

Jacobs, H. H. (1997). Mapping the big picture: Integrating curriculum and assessment, K-12. Alexandria, VA: Association for Supervision and Curriculum Development.

Kilpatrick, W. H. (1929). Education for a changing civilization. New York: The Macmillan Company.

Kilpatrick, W. H. (1934). The essentials of the activity movement. Progressive Education, 11, 346-359.

Lewis, A. C. (1993). Changing the odds: Middle school reform in progress, 1991-1993. New York: Edna McConnell Clark Foundation.

Lipsitz, J. (1984). Successful schools for young adolescents. New Brunswick, NJ: Transaction Books.

Lipsitz, J. Mizell, M H., Jackson, A. W., & Austin, L. M. (1997). Speaking with one voice: A manifesto for middle-grades reform. Phi Delta Kappan, 78(7), 533-540.

Lortie, D. C. (1975). Schoolteacher: A sociological study. Chicago: The University of Chicago Press.

Lounsbury, J. H. (1992). Perspectives on the middle school movement. In In J. L. Irvin (Ed.) Transforming middle level education: Perspectives and Possibilities (pp. 3-15). Boston: Allyn and Bacon.

Marshall, C., & Rossman, G. B. (1995). Designing qualitative research (2nd ed.). Thousands Oaks: Sage Publications.

Maxwell, J. A. (1996). Qualitative research design: An interactive approach. Thousand Oaks: Sage Publications.

McEwin, C. K., Dickinson, T. S., & Jenkins, D. M. (1996). America's middle schools: Practices and progress. Columbus, OH: National Middle School Association.

Nickerson, N. C. (1966). Junior high schools are on the way out. Danville, IL: Educational Research and Development Council of the Twin Cities Metropolitan Area, Inc.

Patton, M. Q. (1990). Qualitative evaluation and research methods (2nd ed). Newbury Park: Sage Publications.

Perkins, D. (1991). Educating for insight. Educational Leadership, 49 (2), 4-8.

Reed, A. and Bergemann, V. (1992). In the classroom: An introduction to education. Asheville, NC: The Dushkin Publishing Group, Inc.

Romano, L. G. & Georgiady, N. P. (1997). The middle School distinction. Fastback, 418. Bloomington, IN: Phi Delta Kappa Educational Foundation.

Ryan, K. & Cooper, J. M. (1998). Those Who Can, Teach (8th ed.). Boston: Houghton Mifflin.

Sagor, R. (1992, April). Collaborative action research: A cultural mechanism for school development and professional restructuring. 2-35. (ERIC Document Reproduction Service No. ED 350 705).

Scales, P. C. (1996). Boxed in and bored. Minneapolis, MN: Search Institute.

SCANS. (1991). What work requires of schools: A SCANS report for America 2000. Washington, DC: U.S. Department of Labor, Secretary's Commission on Achieving Necessary Skills.

Schumacher, D. H. (1995). Five levels of curriculum integration defined, refined, and described. Research in Middle Level Education, 18(3), 73-93.

Seidman, I. E. (1991). Interviewing as qualitative research: A guide for researchers in education and the social sciences. New York: Teachers College Press.

Sternberg, R. J. (1996). Successful intelligence: How practical and creative intelligence determine success in life. New York: Simon and Schuster.

Stevenson, C. (1992). Teaching ten to fourteen year olds. New York: Longman.

Stevenson, C. (1998). Teaching ten to fourteen year olds (2nd. ed.). New York: Longman.

Stevenson, C. and Carr, J. F. (1993). Integrated studies in the middle grades: "Dancing through walls" (Eds.). New York: Teachers College Press.

Stevenson, J. A. (1921). The project method of teaching. New York: Macmillan Company.

Stockton, J. L. (1920). Project work in education. Boston: Houghton Mifflin Company.

Tanner, D. and Tanner, L. (1975). Curriculum development: Theory into practice. New York: Macmillan Publishing Company.

This we believe: Developmentally responsive middle schools. (1995). Columbus, OH: National Middle School Association.

Tye, K. (1992). Restructuring our schools: Beyond the rhetoric. Phi Delta Kappan, 74(1), 8-14.

Van Til, W., Vars, G. & Lounsbury, J. (1961). Modern education for the junior high school years. Indianapolis, IN: Bobbs-Merrill.

Vars, G. F. (1993). Interdisciplinary teaching: Why & how. Columbus, OH: National Middle School Association.

Vars, G. F. (1997). Effects of integrative curriculum and instruction. In Irvin, J. L (Ed.). What current research says to the middle level practitioner (pp179-186).

Watts, G., & Castle, S. (1993). The time dilemma in school restructuring. Phi Delta Kappan, 75 (4), 306-310.

Wood, K. E. (1997). Interdisciplinary instruction: A practical guide for elementary and middle school teachers. Upper Saddle River, NJ: Merrill.

APPENDIX A

Permission for the Study

STATEMENT CONCERNING THE USE OF HUMAN SUBJECTS IN RESEARCH

Name of Principal Investigator: C. Lynn Davis
Senior Advisor: Dr. Margery Miller

A Brief Description of the Study

1. This descriptive study has been designed to identify factors which contribute to innovative programs that incorporate integrated learning at the middle school level. The major goals of my research are to identify the professional beliefs of middle level educators who integrate the curriculum and to determine the type of support needed from team members and the school environment when engaging in integrated instruction.

2. In order to collect data necessary to identify the professional beliefs about and the types of support needed for integrated curriculum, it will be necessary for this researcher to tape record interview sessions and video tape team planning sessions of integrated units. By doing this, the researcher will be able to thoroughly analyze the data for factors that contribute to innovative practices at the middle level. Consequently, all participants will be asked to sign an informed consent form to grant the researcher permission to video tape team planning sessions and to tape record individual interviews. (see attached)

3. All information obtained will be kept secure in a locked file cabinet in the researchers home to preserve confidentiality of the research participants. The anonymity of the research participants will be maintained by using pseudonyms and the anonymity of the school location will be maintained by stating that it is a middle school in New England.

4. There should be no risks involved in the study since I am looking for the "things that work" for middle level educators who engage in integrated instruction. The most likely benefit will be that teachers can feel positive about their curriculum design and instructional techniques.

Informed Consent

Title of the Study: The Professional Beliefs and the Conditions that Support Integrated Curriculum in a New England Middle School

Description of the study: This study is a requirement for completion of my Ph.D. program in Education from Lesley College in Cambridge, Massachusetts. The data collected from this study will be analyzed to help add to the literature on effective innovative practices at the middle level that incorporate integrated instruction as part of their school program. In order to identify such factors, I am requesting permission to tape record individual interview sessions and to video tape team planning meetings when designing integrated units of study for your middle school students.

Risks and Benefits: There should be no risks in your participation in the study. Participants can receive Professional Growth Credits from School Administrative . . . .

Confidentiality: Confidentiality will be maintained at all stages of the study and identifying factors will be changed in order to maintain anonymity of the name and location of the school and each participant will be given a pseudonym.

Rights: Your participation as an interviewee and as a team member in video taped planning sessions in this study is strictly voluntary. You have the right to have answered any questions regarding the research or your participation in it, either now or in the future. If at any time you wish to remove yourself from the study, you may do so.

Consent: I______________________________ have read and understand the description of the purpose and procedures and agree to participate in this study. I have been informed of the risks and benefits involved. I have been assured that any future questions I may have will be answered. I understand that I will receive a copy of this form upon request.

Printed name:____

Signature:_____________________________________ Date:_____________

*If you have any questions, you may contact Lynn Davis at . . . .

August 29, 1997

Lynn Davis

Dear Lynn:

This is to acknowledge receipt of your letter dated August 7, 1997 regarding your doctoral research.

Your proposal has been discussed with the leadership team at our recent meeting on August 11. At that time, three teams expressed an interest in participating in your doctoral projects. The names of the participating teachers have been forwarded to you to enable you to contact them prior to the start of school on September 2.

I look forward to working with you on this worthwhile endeavor.

Sincerely,

Principal

Appendix B

Questionnaire

Name______________________________ Date_____________

Grade levels in your building:_________________

Grade/discipline(s) currently teaching:_______________________________

Questionnaire

Personal Data

1. How many years have you been teaching on a full time basis?

____

2. How many years have you been teaching students at the middle school level?

____

3. What degrees(s) do you hold? What was your major or concentration in each?

	Degree	Major or Concentration
a.	BA or BS	______________________________
b.	M.Ed.	______________________________
c.	CAGS	______________________________
e.	Ph.D.	______________________________

4. At which of the following level(s) was your first teacher certification?

   a. Early Childhood
   b. Elementary
   c. Middle School
   d. Secondary (please indicate content area focus)_______________

5. Do you hold additional certifications? Yes No

   If you answered "yes", at what levels or in what specialty areas.

   ____

Instruction/Pedagogy

6. Please rate each of the instructional methods below on the following scale:

1 - I use this instructional method predominantly.
2 - I use this method of instruction frequently.
3 - I use this method of instruction occasionally.
4 - I never use this instructional method.

a. ______ expository (instructor centered)
b. ______ inquiry (discovery learning)
c. ______ stations/activities (student centered)
d. ______ demonstrations
e. ______ modeling

7. Please rank the ways you engage students in learning. (1 being the most often used to 5 being the least used.)

a. ______ individual assignments
b. ______ whole class instruction
c. ______ cooperative groups
d. ______ small discussion groups
e. ______ working in pairs

8. Please rate each of the following roles used in the classroom to indicate how you use you instructional time.

1 - I use this teaching style predominately.
2 - I use this teaching style frequently.
3 - I use this teaching style occasionally.
4 – I never use this teaching style.

a. ______ disseminator of information/lecturer
b. ______ facilitator
c. ______ questioner
d. ______ collaborator (teacher and students learning together)

9. Please rate each of the following instructional resources you use to support your instruction in the classroom.

1. - I use them predominately
2. - I use them frequently.
3. - I use them occasionally.
4. - I never use them.

a. ______ videos
b. ______ computers (Encarta, searching the Web, etc.)
c. ______ trade books
d. ______ community resources
e. ______ textbooks and workbooks
f. ______ magazines and newspapers

10. What words would you use to describe curriculum that is effective for young adolescent learners?

11. How long have you been teamed with your present team members?

____

12. Have you ever been on another team? Yes No

If so, for how long and where? ______ ________________________

13. How was your present team formed?
a. self-selection
b. principal selection
c. geographic location in the building
d. interview selection

14. Without using people's names, please list attributes you value in teammates

Professional Growth

15. Are there any authors, books or journals that are important to you? If so, please list below.

16. Assume that your district has been awarded a grant that would provide each teacher with equal funding for professional growth activities. Design your individual staff development plan by ranking each activity from 1 to 6. (1 being your first choice to 6 being your last choice).

a. _____ subscribing to and reading professional magazines or journals
b. _____ attending conferences
c. _____ attending graduate courses
d. _____ networking with other teaching professionals
e. _____ developing interdisciplinary units
f. _____ visiting schools that engage in integrated instruction

Name________________________ Date___________

Grade levels in your building:________________

Grade/discipline(s) currently teaching:_____________________________

Questionnaire

Personal Data

1. How many years have you been teaching on a full time basis?

   ____

2. How many years have you been teaching students at the middle school level?

   ____

3. What degrees(s) do you hold? What was your major or concentration in each?

	Degree	Major or Concentration
a.	BA or BS	______________________________
b.	M.Ed.	______________________________
c.	CAGS	______________________________
e.	Ph.D.	______________________________

4. At which of the following level(s) was your first teacher certification?

   a. Early Childhood
   b. Elementary
   c. Middle School
   d. Secondary (please indicate content area focus)_______________

5. Do you hold additional certifications? Yes No

   If you answered "yes", at what levels or in what specialty areas.

   ____

(Tabulations for questions 1-5 can be found in Figure 3.1 on page 58.)

Instruction/Pedagogy (See pages 170-173 for tabulated results for questions 6-9)

6. Please rate each of the instructional methods below on the following scale:

1 - I use this instructional method predominantly.
2 - I use this method of instruction frequently.
3 - I use this method of instruction occasionally.
4 - I never use this instructional method.

a. ______ expository (instructor centered)
b. ______ inquiry (discovery learning)
c. ______ stations/ activities (student centered)
d. ______ demonstrations
e. ______ modeling

7. Please rank the ways you engage students in learning. (1 being the most often used to 5 being the least used.)

a. ______ individual assignments
b. ______ whole class instruction
c. ______ cooperative groups
d. ______ small discussion groups
e. ______ working in pairs

8. Please rate each of the following roles used in the classroom to indicate how you use you instructional time.

1 - I use this teaching style predominately.
2 - I use this teaching style frequently
3 - I use this teaching style occasionally.
4 - I never use this teaching style.

a. ______ disseminator of information/ lecturer
b. ______ facilitator
c. ______ questioner
d. ______ collaborator (teacher and students learning together)

9. Please rate each of the following instructional resources you use to support your instruction in the classroom.

1. - I use them predominately
2. - I use them frequently.
3. - I use them occasionally.
4. - I never use them.

a. ______ videos
b. ______ computers (Encarta, searching the Web, etc.)
c. ______ trade books
d. ______ community resources
e. ______ textbooks and workbooks
f. ______ magazines and newspapers

10. What words would you use to describe curriculum that is effective for young adolescent learners?

(A summary of the words most frequently used by the respondents to describe effective curriculum for young adolescent learners can be found on page 174)

11. How long have you been teamed with your present team members?

____

12. Have you ever been on another team? Yes No

If so, for how long and where? ______ ________________________

(There were a range of responses to questions 11 and 12. No particular patterns emerged from these two questions.)

13. How was your present team formed?
a. self-selection
b. principal selection
c. geographic location in the building
d. interview selection

(The four core teachers on the Longview Team indicated that their team was formed through self-selection. Three of the teachers on the Outback Team stated that their team was form by a combination of self-selection and principal selection. Other responses varied from principal selection only to interview selection)

14. Without using people's names, please list attributes you value in teammates

(A summary of responses for question 14 can be found in Figure 4.1 on page 84.)

Professional Growth

15. Are there any authors, books or journals that are important to you? If so, please list below.

(Over half of the participant read professional middle school journals and books by such authors as Stevenson, Beane, Lounsbury, and Brazee and Capelluti. One teacher mentioned reading young adult literature and another had recently read the works of Paulo Freire. Two participants did not respond to this question.)

16. Assume that your district has been awarded a grant that would provide each teacher with equal funding for professional growth activities. Design your individual staff development plan by ranking each activity from 1 to 6. (1 being your first choice to 6 being your last choice).

a. ______ subscribing to and reading professional magazines or journals
b. ______ attending conferences
c. ______ attending graduate courses
d. ______ networking with other teaching professionals
e. ______ developing interdisciplinary units
f. ______ visiting schools that engage in integrated instruction

(A summary of the result for question 16 can be found on page 175)

Tabulated Results for Individual Questionnaires

Instruction/Pedagogy

6. Please rate each of the instructional methods below on the following scale:

1 - I use this instructional method predominantly.
2 - I use this method of instruction frequently.
3 - I use this method of instruction occasionally.
4 - I never use this instructional method.

a. ______ expository (instructor centered)
b. ______ inquiry (discovery learning)
c. ______ stations/activities (student centered)
d. ______ demonstrations
e. ______ modeling

Instructional Method	**Rates of Use by Participants**			
	1	2	3	4
Expository	0	5	4	1
Inquiry	0	9	0	1
Stations/Activities	2	4	4	0
Demonstrations	0	4	6	0
Modeling	0	6	4	0

Inquiry or discovery learning and modeling appeared to be the most frequently used instructional methods. Expository teaching, stations/activities and demonstrations seemed to be balanced methods used throughout their teaching.

7. Please rank the ways you engage students in learning. (1 being the most often used to 5 being the least used.)

a. ______ individual assignments
b. ______ whole class instruction
c. ______ cooperative groups
d. ______ small discussion groups
e. ______ working in pairs

Engaging Student Learning	**Method**				
	1	2	3	4	5
Individual Assignments	1	0	5	2	1
Whole Class Instruction	3	2	2	0	2
Cooperative Groups	1	3	0	5	0
Small Group Discussion Groups	1	1	5	0	2
Working in Pairs	2	3	2	1	1

Responses to question seven appear to indicate that a variety of methods were used to engage students in learning. One participant responded to this question in a narrative statement. He felt that the choices provided did not represent ways in which to engage students in learning, but were examples of group configurations. Another teacher wrote that her answers could not accurately represent the ways she engages students in learning since the method she uses depends upon the particular activity or lesson.

8. Please rate each of the following roles used in the classroom to indicate how you use you instructional time.

1 - I use this teaching style predominately.
2 - I use this teaching style frequently.
3 - I use this teaching style occasionally.
4 – I never use this teaching style.

a. ______ disseminator of information/lecturer
b. ______ facilitator
c. ______ questioner
d. ______ collaborator (teacher and students learning together)

Teaching Style	**Rate of Use in Teaching**			
	1	2	3	4
Lecturer	0	3	6	1
Facilitator	2	7	1	0
Questioner	2	6	2	0
Collaborator	2	2	5	1

The teaching styles that appear to be used most often are facilitator and questioner. Less than half of the teachers frequently lectured to their students and over half of the participants lectured occasionally. Two teachers indicated that this question was difficult to answer since their teaching styles varied depending upon the activity.

9. Please rate each of the following instructional resources you use to support your instruction in the classroom.

1. - I use them predominately
2. - I use them frequently.
3. - I use them occasionally.
4. - I never use them.

a. ______ videos
b. ______ computers (Encarta, searching the Web, etc.)
c. ______ trade books
d. ______ community resources
e. ______ textbooks and workbooks
f. ______ magazines and newspapers

Instructional Resources	**Rate of Use**			
	1	2	3	4
Videos	0	1	8	1
Computers	0	2	8	1
Trade Books	0	6	3	1
Community	1	3	5	1
Textbooks and workbooks	1	3	4	1
Magazines/Newspapers	0	6	4	0

Responses to question nine indicate that these teachers use a variety of resources when teaching their lessons. Most responses fell somewhere between frequent and occasional use for this range of instructional resources.

10. What words would you use to describe curriculum that is effective for young adolescent learners? Please list below.

The following list represents the words most frequently used by the participants to describe effective curriculum for young adolescent students. Similar or related words were grouped together to arrive at these figures.

Descriptive Words	Number of Times Mentioned
Challenging	5
Authentic	5
Related to Students' Lives	4
Flexible	3
Varied Approaches	3
Hands-On/Experiential	3
Differentiated	2

Professional Growth

16. Assume that your district has been awarded a grant that would provide each teacher with equal funding for professional growth activities. Design your individual staff development plan by ranking each activity from 1 to 6. (1 being your first choice to 6 being your last choice).

a.	______	subscribing to and reading professional magazines or journals
b.	______	attending conferences
c.	______	attending graduate courses
d.	______	networking with other teaching professionals
e.	______	developing interdisciplinary units
f.	______	visiting schools that engage in integrated instruction

Professional Activity	Rank					
	1	2	3	4	5	6
Professional Reading	1	0	1	2	4	1
Conferences	2	2	2	2	0	1
Graduate Courses	1	1	0	3	0	4
Networking	1	2	1	0	4	1
Interdisciplinary Units	1	2	3	1	0	0
Visiting Schools	3	2	2	0	1	1

From these results, it appears that the participants engage in a variety of activities for professional development.

Appendix C

Interview

Name________________________________ Date____________

Grade levels in your building:__________________

Grade/discipline(s) currently teaching:___________________________

Interview Questions

1. I'm really interested in integrated curriculum in middle school. Could you tell me about what it means to you?

2. How did you get started with integrated curriculum?
   Tell me about an integrated unit that has worked for you.

3. I have learned from other teachers that integrating the curriculum is not always successful. Have you ever experienced a similar situation? Can you tell me why you believe that some integrated units are more successful than others?

4. Have you found ways to group students that have worked for you and for them?

   Are students involved in making decisions regarding topics of study? Do they have choice in what they study and with whom they work?

5. I'm interested in knowing the types of resources and instructional materials you believe are most effective with middle level students.

   Can you tell me about some of the materials and resources you feel have worked well with young adolescents?

6. I've learned from other teachers that daily class schedules and the physical structure of classrooms vary greatly from school to school. I am interested in finding out how the length of class periods and your physical classroom space impacts the implementation of integrated curriculum?

7. According to your questionnaire, your team has been working together for ________ Over this period of time, how has the team supported members either professionally or personally when involved in planning integrated instruction?

8. The questionnaire also indicates, that as a team, you have had a variety of educational experiences. I'm interested in knowing about the strengths you feel you contribute to the team. Could you tell me about some of those strengths?

9. Considering the strengths you bring to the team and the way the team supports other members, what to you believe are the most important qualities in a team member?

10. What advise do you have for principals in forming teams?
    In what ways can they be supportive?
    Do you believe the leadership of your school administration is supportive of integrated curriculum?
    W hat do you think their motivation is? (parents, community)

11. If you were advising a teacher without much experience about integrated curriculum, what would you tell them?

12. Is there a question that I have not asked that you would like to comment on?

Appendix D

Sample Notes from Videotaped Team Planning Meeting

(The Outback Team)

Date: November 4, 1997

Team Members Present: Rob, Doug, and Kate

Location: Rob's Classroom

Length of Session 50 minutes

Topic: Planning World Religion unit

Prior to discussing their religion project, the Team briefly explained to Scott, who is new to the team, some of the aspects of their True Love project. This is another unit where students will research different countries, write to embassies, study the geography and the culture. This unit will to be taught later in the year.

Concepts for Religion Unit:

- creation myths – want kids to understand how creation is explain in the religion they have chosen (Scott) – students have 7 religions to choose from for their individual reports. (Doug)
  - *"We don't use the term creation or the term evolution per say" – Explain how the world came to be because that's in all religions. We do make sure we don't give them [students or parents] any ammunition to complain about the content of the unit (such as writing a letter to the editor in the local newspaper)
  - * There are perimeters that the children must follow such as not teaching religious doctrine nor researching a cult. (Rob speaking to the rest of the team)

- cultural awareness (Research a culture not a cult)
- government/church (the relationship)
- different religions among ourselves and others (compare and contrast)
- opinions about theology of religion studied and own religion

Research Questions:

(1) What is the religion? (2) What were the beliefs? (3) What were the effects of those beliefs on the culture? (Team consensus)

Skills –All steps in the research process are directly taught

- gathering information (videos, articles) Joan will put articles on tape because of limited resources. Books on religion will be checked out of the library and brought to the classrooms. A few students each day can use the internet
- choosing appropriate materials (encyclopedia, Internet, videos, articles) (Whole Team discussion)
- note taking
- selecting a topic sentence
- organizing notes
- thinking skills (defending a thesis)
- following directions
- developing paragraphs
- writing a summary
- bibliography
- charts and graphs
- create a visual for the final report

Assessment:

- contract sheets
- rubrics based on state frameworks
- checklist (timeline for assignment deadlines)

Logistics/Research Format

- Begin unit after Thanksgiving – finish 2nd week in January. The unit had to be planned around the Governor's visit.
- Timeline for entire unit according to what was to be covered in each class session – Team members first provide general information about different world religions before students begin their individual research.
- Discussed the format of the final report – didn't want a picture on the title page (too much "fluff")
    - number of paragraphs were designated
    - interpretations of charts and graphs given a limit for length (40 words)
    - report to be typed or written in blue or black ink

Kate discussed how she was going to modify the research requirements for her students who had special needs.

Appendix E

Sample Rubric for an Integrated Middle School Unit

(Developed by the Longview Team)

Native American Inter-Tribal Oral Presentation Rubric Name____________________

You are the Reincarnation of a Native American Historian	Pretty Darn Convincing	Not Yet Successful
2 Made frequent eye contact with the audience	1 Looked at audience on occasion, but not continually	*0* Did not look at audience
7-5 Able to answer all questions	4-3 Able to answer most questions	2-0 Unable to answer most questions
7-5 Factual information is accurate and tied smoothly into presentation	4-3 Some factual information about character included	2-0 Information shared lacked depth and/ or accuracy
2 Projected voice and spoke clearly	1 Projected voice and spoke clearly most of the time	0 Did not project voice and speak clearly

Comments: 2 points

20-18	A	FINAL GRADE
17-16	B	
15-14	C	
13-12	D	
11-0	F	________

POSTER RUBRIC

Paintings / Illustrations / Murals
Picture Book / Diagrams

Unit:__________________

GUMS =grammar,usage, mechanics, spelling

Name:__________________

Successful 3	Average Work 2	Not Yet Successful 1
work has zero g.u.m.s. errors	work has 1-3 g.u.m.s. errors	work has 4+ g.u.m.s. errors
3 *quality is evident w/ straight writing. cutting.etc and no pencil marks showing or double lines*	2 *quality is marginal w/ crooked writing. cutting.etc OR pencil marks showing or double lines*	1 *quality is poor w/ crooked writing. cutting.etc and pencil marks showing or double lines*
2 words are in blue/black ink or typed, decorative writing is used where can be used to accent the work	1 words are not in blue/black ink or typed, some attempt at decorative writing, but did not follow through	0 words are not in blue/black ink or typed, no attempt at decorative writing
2 decorative borders, contrasting colors, matting and materials other than ink are used to accent your project	1 some decoration used and colors, matting and materials other than ink but it distracts from the project	0 no decoration used and colors, matting and materials other than ink
2 title is representative of work	1 title is does not represent what is shown	0 title is missing
3 *visuals, graphics, pictures, etc accent work with captions that fully explain them*	2 *visuals, etc are poor quality OR captions lack full explanation*	1 *few or no visuals, etc OR no captions*
5-4 information displayed is 100% accurate and thorough	3-2 information shared is mostly accurate AND/OR limited	1-0 information shared is mostly inaccurate and cursory

comments: (-2 pts, if missing)

total points________ grade______

grading scale

20-18	A
17-16	B
15-14	C
13-12	D
11-0	F

Native American Inter-Tribal Clothing/Model/Artifact Rubric

Tribe:________________ **Name:**__________________________

GUMS=grammar, usage, mechanics,spelling

Exemplary Work	Average Work	Not Yet Successful
3 Work has zero grammar, punctuation, spelling, mechanic errors	2 work has 1-3 g.u.m.s. errors	1 work has 4+ g.u:m.s. errors
5-4 content or information displayed is 100% accurate	3-2 content or information shared is mostly accurate and/or limited	1-0 content or information shared is mostly inaccurate and cursory
3 captions used clearly explain the product being viewed and are in ink	2 captions used lack full explanation or are not in ink	1 few or-no captions used and not in ink
3 *quality is evident w/ straight writing. cutting workmanship. construction and no pencil marks showing or double lines*	2 *quality is marginal with poor workmanship in cutting and/or construction with things like pencil marks or double lines showing*	1 *quality is poor with poor workmanship in cutting and/or construction with things like pencil marks or double lines showing*
counts double if product is not student made 3 product's origin is thoroughly shared/displayed	2 product's origin is somewhat shared/displayed	1 product's origin is missing or inaccurate
3 product looks realistic and authentic with much detail evident	2 product looks mostly realistic and authentic with some detail evident	1 product does not look authentic and realistic

comments: (-2pts. if missing)

total points________grade______

20-18 A
17-16 B
15-14 C
13-12 D
11-0 F

NOTES RUBRIC

Native American Inter-Tribal Project

ame: ______________________

Awesome Notes- Ready to be Published		Not Yet Successful
___Notes follow one of the five formats taught double column/ outline/ web / concept map/ list	(2 points)	___Notes do not follow one of the taught formats
___Phrases or fragments used	(2 points)	___Complete sentences used
___Put in your own words	(2 points)	___Wording is plagiarized
___Drew lines to show change in source and numbered source	(2 points)	___Did not draw lines to show change in source and / or didn't number source
___Organized by topics or sources according to topic titles	(2 points)	___Used random note taking with little or no organization
___All spelling is correct	(2 points)	___Some incorrect spelling
___All content is accurate	(3 points)	___Content is not all accurate
___Notes are in-depth and sufficiently addresses each topic area	(3 points)	___Notes lack depth and are insufficient in addressing most topics

Comments: (2 points)

20-18 A
17-16 B
15-14 C
13-12 D
11-0 F

FINAL GRADE:_____

Name:____________________

BIBLIOGRAPHY
Native American Inter-Tribal Project

Name:____________________

What An Awesome Bibliography!!	Not Yet Successful
___All resources cited (6 points)	___All resources not cited
___All entries are spelled correctly (6-4 points)	___Some or all entries are not spelled correctly
___3 or more resources were used (6 points)	___Fewer than 3 resources used

COMMENTS: (2 points)

20-18	A
17-16	B
15-14	C
13-12	D
11-0	F

FINAL GRADE:_____