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The Interdisciplinary Approach to Learning:
Theory, Design and Implementation.

by
Kathleen E. Ratz

A Thesis

Submitted in partial fulfillment of the requirements of
the Master of Arts Degree in the Graduate Division of
Rowan College of New Jersey
May, 1996.

Approved by _____

Date Approved May 1996

ABSTRACT

Kathleen E. Ratz

The Interdisciplinary Approach to Learning: Theory, Design, and Implementation. 1996.
Thesis Advisor: Regina Pauly,
School and Public Librarianship,
Rowan College of New Jersey.

The purpose of this thesis is to examine a synergistic form of learning known as the integrated curriculum. An interdisciplinary approach to teaching, the integrated curriculum seeks to explore the connections and interrelations that exist between academic subject areas in order to create educational experiences that reflects what we know about the learning process.

Discussed in the thesis are the theoretical and philosophical background of this form of experiential learning, historical attempts at implementation, current thinking on design and implementation, and finally practical applications. Conclusions are drawn from all of the above sources and a list of essential criteria for successful implementation is suggested. Particular focus is given to the role of the media-specialist, as coordinator and facilitator of the process.

It is generally agreed that if our children are to compete successfully in the future global economy, some drastic changes must be made in the way in which we

educate them. Students need to learn to become perceptive, innovative, self-directed thinkers. This model of education is a step in that direction. As such the integrated, interdisciplinary curriculum has been endorsed by both the National Middle School Association and the Association of Middle School Principals.

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The purpose of this thesis is to examine an interdisciplinary form of education known as the integrated curriculum, which seeks to explore possible connections that exist between academic subject areas. The work discusses theoretical and philosophical foundations of the philosophy found in literature as well as historical attempts by educators to implement programs. Current models and methods are also discussed, followed by practical observations and applications. Conclusions are drawn from the above sources and experiences and a list of essential criteria for successful implementation suggested.

ACKNOWLEDGEMENTS

The author wishes to thank her husband, Karl E. Ratz, for his encouragement, patience, love, and support, throughout this course of study.

I would also like to thank my parents, Albert and Marie Ellmer, for instilling in me their physical, intellectual, and emotional stamina, my sister, Marie Ann Ellmer RSM, for her unwavering and unyielding faith in me, my other sister Michelle for her gift of wit and wisdom, and my beloved son, David Kilian, for making all of this necessary. I am indeed rich beyond measure!

I would also like to acknowledge and thank Dr. Elaine Lee for showing me the path, and Ms. Regina Pauly for guiding my steps.

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CHAPTER 1

Introduction

To the young mind everything is individual, stands by itself. By and by, it finds how to join two things and see them in one nature; then three, then three thousand...discovering roots running underground whereby contrary and remote things cohere and flower out of one stem."

(Emerson in Fogarty 61)

Pieces of the Puzzle

When a child begins to learn, he does so by acting upon his world, seeing the effect of his actions, and formulating a concept based upon what he has observed. He then fits this new learning into the context of previous experiences and creates for himself a broader picture of his reality (Piaget 213). This is what we call knowledge. Things progress naturally along those lines for most children, until they begin their formal schooling. From that point, and with progressively greater frequency, new concepts are added, which the child often does not have the opportunity to act upon, and which are outside of the experiential context. If the child cannot successfully incorporate these concepts into his reality, little, if any of the information is retained for long. However, since the dawn of the Industrial Revolution, this is the method we have used to "educate" our population.

James Bean likens this style of education to being asked to put together a jigsaw puzzle, without the benefit of seeing the picture. "It is the picture, after all, that gives meaning to the puzzle and assures us that the pieces fit together, that none are missing, and that there are no extras" (9). Students in a typical school curriculum are bombarded with an endless stream of facts and skills that are unconnected, fragmented, and seemingly unrelated. It is no wonder that students accuse schools of being unresponsive to their needs in particular, and irrelevant to life in general.

Experience and Education

In the real world, we encounter problems or situations, analyze them based on previous experience, gather information from the resources available to us, and generate solutions (Jacobs 1). We do not ask which part of a problem is math, which science, which history etc. That the concepts and competencies they are studying in isolation, will someday prove to interconnect and make one picture, must be taken by students on faith, since they as yet lack the experience necessary to synthesize them into a personal reality. Young people today more than ever, see themselves stuck in an educational time warp, where, in spite of exploding

technological advances, they are forced through an ever narrowing conduit filled with the meaningless refuse of an age gone by.

John Dewey foresaw this caveat in education almost 100 years ago, while formulating the Pedagogic Creed that would direct his life and his work. In his assessment of schools he writes:

I believe that much of present education fails because it neglects this fundamental principle of the school as a form of community life. It conceives the school as a place where certain information is to be given, where certain lessons are to be learned, or where certain habits are to be formed. The value of these is conceived as lying largely in the remote future; the child must do these for the sake of something else he must do; they are mere preparation. As a result they do not become part of the life experience of the child and so are not truly educative (23,24).

It is clear that if our educational system is to ever meet the needs of our students and our society in the century ahead, some radical changes must be made in the way our schools operate and educate. Students must be exposed to more than just meaningless concepts. Students need to be able to make sense of the bits and pieces, to take what we as pre-school children do naturally; observe, analyze, gather data, evaluate, and synthesize; and apply it to understanding the ever more sophisticated and complicated picture of life.

The Integrated Curriculum

This thesis will explore and test a synergistic model of education designed to eliminate the fragmented way we educate our children today, and dissolve the artificial boundaries that educators construct between academic disciplines. It is called many things; interdisciplinary, holistic, integrated, immersed, to name a few. For the purpose of this paper the term "Integrated Curriculum" (IC) will be used. Integrating a curriculum means using a theme, concept, or problem as the basis for study across the content areas. It emphasizes connections and interrelations among various areas of knowledge, in order to fully explore the topic and all its facets. Teachers of different academic disciplines, as well as general classroom teachers, work in a coordinated effort to develop common threads that can link content areas, thus providing opportunity for a well rounded exploration of a given topic. The resulting programs are largely resource-based and experiential in nature. Often, the school library-media specialist serves as the coordinator of both the planning process and its implementation, as well as a facilitator of information, resources, and special events.

The aim of this cooperative effort is to develop and implement programs which reflect what we know about how

children learn. As experientialists such as Piaget have proven, people learn best when they can relate present learning to past knowledge, thereby creating a connection. The brain utilizes experiences from sensory input, emotions, perception, and communication to search for common patterns. "Every experience actually contains within it seeds of many, and possibly all, disciplines" (Pool 67). It is these connections which facilitate the transfer of learning. Therefore, by affording students the opportunity to explore a topic or problem from more than one angle, we increase the possibility that they will create the connection necessary for learning. We are also reinforcing the concept that there are many ways to approach, explore, and resolve challenges, ideas and problems. This mindset is sadly lacking in the current authoritarian, isolated curriculum, but one which is vital for students to develop if they are to meet the challenges of the future.

Educating for the Future

Over the past several years, interest in the integrated curriculum has grown as educators seek ways to help our educational system evolve from its Industrial Age format into one which will meet the needs of this era of technology in which we find ourselves. Heidi Hayes

Jacobs, editor of Interdisciplinary Curriculum: Design and Implementation, cites several reasons for this. The first is that in the midst of this worldwide information explosion, the traditional school curriculum is incapable of incorporating even part of the newest most valuable information into already bulging subject areas, thus leaving students ever further behind the existing state of knowledge. Secondly, students themselves are becoming increasingly impatient with a passive learning style which is archaic and irrelevant. Thirdly, the educational system, as it exists is riddled with waste and redundancy wrought by the isolation and lack of communication between subject areas (3-6).

Society is beginning to demand of its businesses and professions a more balanced approach to their work. Doctors are expected to treat the whole human being, and not just an ailing body part. Business schools are teaching ethics, communication, and interpersonal relations. What was once a highly specialized world, has begun to see the multifaceted range of influences which effect each specific field. Many educators feel that implementing an interdisciplinary approach in our schools will help students develop and adapt an integrated approach to problems beyond their school years (Jacobs 6). These arguments seem so cogent that both the National Middle School Association, and the National

Association of Middle School Principals have drafted resolutions in support of this pedagogy (Vars 14).

Method and Prediction

In this thesis, I will explore the evolution and current methodology of the Integrated Curriculum through a survey of literature on the subject, discuss my observations of an actual working model of the concept, and attempt to adapt a model for my own school situation. I will also discuss the role that the school media center and its personell can play as the natural fulcrum which supports, enables, and coordinates the process and its participants at all stages and levels. I hope to show how this format is not only workable within the existing structure of today's schools, but also an exciting and preferable model for education in the twenty-first century.

CHAPTER 2

Historical Groundwork:
Survey of the Literature
Part 1Experiential Learning

Efforts to establish a school environment based on the natural principles of child growth and development can be traced as far back as Comenius (1592-1670), the famous educator who first espoused the concept of learning readiness. Foreshadowing later naturalist reformers like Rousseau, Pestalozzi, and Locke, Comenius developed nine principles of teaching based on the philosophy that the formation of ideas begins with a persons immediate sensory response to external stimuli. He argued that teaching methods must incorporate the active use of the senses rather than passive memorization. His plans for the organization and administration of effective schools are considered pioneer works for modern progressive education (Power 195-7), and his writings on stages of growth and development are still regarded as valid by educators and child psychologists (Piaget 376).

Progressive Pioneers

In the early part of this century, philosophical and practical groundwork in the development of the integrated

curriculum were layed by experientialists such as Dewey, Piaget, Montessori, and Steiner. Each of these educators contributed significantly, both through their writings and through practical applications of their philosophies, to the general change in educational theory and methodology that has taken place over the last half century. The work of John Dewey, the great American philosopher and educator has, perhaps, had the greatest influence in this country upon pedagogical thought. Dewey saw the school as a microcosm of the society it serves, and viewed children as socially active participants in the society. As with any human being, children seek knowledge of their environment in order to gain control over it. They use their innate intelligence and previously collected knowledge to solve any problems they encounter in this search (Dewey 89-90).

During his tenure as both professor of philosophy at the University of Chicago, and as director of the university's Laboratory School, Dewey had the opportunity to test and hone his theories, which he published in a number of works including the noted works The Child and the Curriculum and Democracy and Education. In these works he advocated a method of education whereby the learner uses the scientific method to understand, control and direct his environment by constantly reflecting upon and testing ideas, beliefs and values. He believed schools should provide a richness in materials and

experiences that would excite children to examine, experiment and create at the various stages of their intellectual development (Ornstein 137-8).

Other turn of the century educators such as Rudolf Steiner, and Maria Montessori, also put their beliefs in experiential learning into practice with school prototypes and methods that thrive to this day. There are 552 Waldorf Schools in 32 countries which function on the principles and methods of Steiner who, much like Dewey, held that "man is a threefold being of spirit, soul, and body whose capacities unfold in three developmental stages on the path to adulthood: early childhood, middle childhood and adolescence" (Barnes 52).

Although much more structured than many other experiential programs, the Waldorf curriculum can be seen as an "ascending spiral" where study focuses on one subject or topic for an extended period and around which everything revolves, building an ever greater level of understanding. The arts and practical sciences play an essential part in this process throughout the grades providing the sensory and emotional experiences which clarify and strengthen the intellectual development. According to Henry Barnes, Chairman of the Board of Trustees for the Association of Waldorf Schools in North America, the object here is the successful development of the "whole human being - head, heart, and hands" (54).

Likewise, the Maria Montessori method, which focuses primarily on early childhood learning, is based on the belief and observation that when provided with a rich and stimulating sensory environment, children will sustain a given activity, without prodding, or reward, repeating it until a level of mastery has been accomplished. That mastery serves not only as a reward in itself but as a practical foundation for the mastery of further skills (Montessori 10-17). Materials in the Montessori environment are carefully designed to be self-correcting or "control of error" thus allowing the child an immediate check on his performance (Orem 19-35).

The aim is an inner one, namely, that the child train himself to observe; that he be lead to make comparisons between objects, form judgements, to reason and to decide.

(Montessori in Orem 22)

Core Curriculum

With the passage of child labor laws and the extension of compulsory education in the 1930's, educators began questioning the effectiveness of the educational system which served the ideas and needs of an Industrial Age (Beane 10). Progressive educators were drawn to core curriculum with a strong emphasis on student centered, integrated approaches to learning

Beginning with the now famous Eight Year Study of the Progressive Education Association (Aiken 1942), studies repeatedly supported the effectiveness of various

types of integrated or interdisciplinary programs. "In nearly every instance, students...performed as well or better on standardized achievement tests than students enrolled in the usual separate subjects" (Vars 15). However, despite the repeated success of early integrated programs, the academic subject-centered style curriculum maintained its strangle-hold in all but 12 percent of American schools by the 1950's. With the national hysteria surrounding the launching of Sputnik, progressive student-centered, experiential types of programs were quickly relegated to the back burner in order to clear the way for the more politically expedient cramming of additional math and sciences into an already jampacked curriculum (Beane 10). In the ensuing panic, money and mandates became a substitute for clear-headed, long range planning and lasting reform.

A Nation at Risk

By the early 1980's it became clear to anyone who cared to look, that our educational system was in trouble. Countless studies consistently reported statistics of ever decreasing test scores. Not only were the math and science scores dismal, but language, verbal, and reading skills were declining at an even more alarming rate (Ornstein 504-15). Cognitive thinking, reasoning and problem solving skills were devastatingly low. U.S. students, once the best educated group in the

world, were now coming in last among the industrialized nations in many areas (Glasser 426).

With the winds of change once again blowing, educators began to look at ways to significantly change the methods we use to educate our children. Obviously, what worked in our industrial society of the past was not having the same effect on students in the technological society of today. Some argue that a more student-centered, resource-based approach would "help students make sense out of the multitude of life's experiences and the bits and pieces of knowledge being taught in the typical...school curriculum" (Vars 14). Various types of integrated curriculum were proposed, based on the core-curriculum concept, focusing on the problems, issues, and concerns of students, and based on the way we know that children learn best (Pool 67).

In many primary schools, what has been called the Whole Language method is being used with considerable success. This approach, which uses language and reading as a springboard for the exploration of various topics, incorporates as many academic subject areas as possible. Because of the fact that most primary students see only one "core" teacher for much of the day, the transition to Whole Language has been relatively smooth and is now fairly commonplace in our schools. The emphasis here is not on practice or drill, but on using good literature to analyze ideas and concepts throughout the curriculum,

emphasizing the way language is used in real situations, thus expanding not only reading ability, but also the essential core of knowledge children need for further learning (Clark 3-18).

Effecting this same type of transition in the upper grades, however, has not been as easy. Heidi Hayes Jacobs has cited several reasons for this. Traditionally, secondary schools have been totally structured around a subject discipline curriculum. Physical facilities, time constraints, faculty certification and professional identification all conform to the perimeters which facilitate this type of school environment (Jacobs 4-7). There is also the psychological barrier placed by tradition; secondary schools have been operating this way for so long that is difficult to imagine any other way (Brandt 24).

The creation and popularity of the Middle School concept has facilitated the breakdown of many of these secondary school barriers, however. No longer is the education of students in these middle grades modeled after a junior version of high school education. Middle School reform movements have begun to focus on the unique characteristics of the early adolescent. Organizational arrangements are beginning to change with block scheduling and interdisciplinary collaboration among teachers (Beane 10). In 1988 the National Middle School Association adopted a resolution affirming

interdisciplinary team organization "as the appropriate arrangement for middle level teachers and students" (Loundsbury, vi).

Even on the high school level reform is inevitable, and avenues are already being sought to implement a curriculum in which time and resources can be utilized more flexibly and naturally to achieve learning success, rather than giving students "one, uniform, routine chance to receive needed instruction and to demonstrate their learning successfully" (Spady & Marshall 70). There are many methods and models proposed by various educators who are proponents of an integrated curriculum, several of which will be discussed in the following chapter. The goal of these teaching strategies seem to be the same; that is, the development of lifelong learning skills that will take students well past their school years and serve them throughout their lives (Drake 48-9).

CHAPTER 3

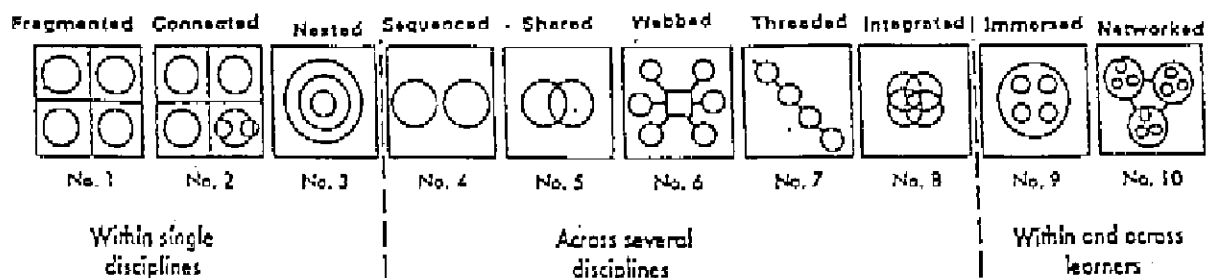
Models and Methods:
Survey of Literature,
Part 2

Design Options

To put it at its simplest, curriculum integration is a conscious effort to connect subject areas that have not previously been connected (Drake 4). But the methods used in the achievement of this goal depends largely upon the model or design chosen by the curriculum developers. In this chapter I will explore several different variations, which can be used either in isolation or as part of a continuum toward the implementation of an effective program.

Robin Fogarty proposes such a continuum, grouping models into three categories: those which span the single discipline, those which connect across several disciplines, and those which focus on the interest of the learner within and across subject areas. (Fig. 1).

Figure 1: Continuum of Options - Fogarty



(for a definition of terms see Glossary)

These models are designed to be used as prototypes for educators in a variety of situations, either alone, with partners or in teams. The objective of Fogarty's models is that over time they can be used to create an integrated curriculum throughout the school ("Ten Ways to Integrate the Curriculum" 61-65). The author also suggests that planning an integrated curriculum is an ongoing process and calls on teachers to invent their own designs to keep the process fresh and vibrant.

A similar continuum is discussed by Heidi Hays Jacobs in Interdisciplinary Curriculum: Design and Implementation. Jacobs models progress from single, parallel and multi-disciplinary forms, through interdisciplinary units or courses, to fully integrated days and complete programs (Fig. 2)

Figure 2: Continuum of Options - Jacobs

Continuum of Options for Content Design

Discipline Based	Parallel Disciplines	Multi-Disciplinary	Inter-disciplinary Units/Courses	Integrated Day	Complete Program

Jacobs discusses the advantages and disadvantages of each, providing administrators with a framework of design options from which to choose in planning their program (see Glossary). The criteria for selection depends largely upon factors such as schedule flexibility,

support of staff, and the nature of curriculum requirements. Jacobs suggests that in her experience not one but a "combination of design options manifest the greatest success and the least fragmentation" (p.13-19).

Yet another educator who has written extensively on the topic, Susan Drake, suggests three basic models for an integrating curriculum: the multi-disciplinary, inter-disciplinary, and trans-disciplinary approaches (Fig. 3, 4 & 5) ("How our Team..." 21,22).

Figure 3: Interdisciplinary Approach - Drake



Figure 4: Multidisciplinary Approach - Drake

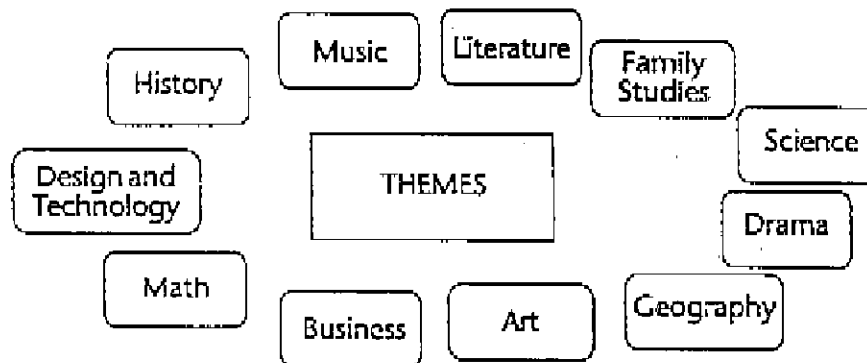
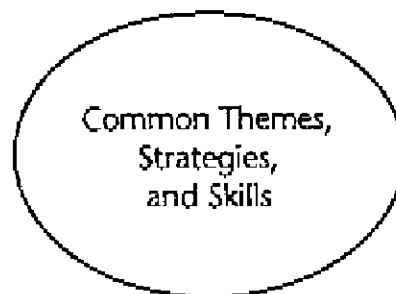


Figure 5: Transdisciplinary Approach - Drake



However, Drake cautions

Perceptions of top-down mandates of how to integrate have often been met with almost reflex-like resistance. Allowing groups to come to their own sense of "what", guided by a collaborative vision is important (Planning Integrated Curriculum: The Call to Adventure 10)

Whatever the approach, Drake suggests that in the end, integration takes "just jumping in and doing it" (11). Whether the "jumping" takes years of planning or weeks, the important thing is getting started.

Pre-conditions for Success

There are at least as many suggested methods for implementing an integrated curriculum as there are models. However these guidelines all share certain basic commonalties, which are considered crucial. First, and foremost, there must be real commitment and support for this type of program on all levels of the school administration. Reform this sweeping must start from the top, or it will never work (Ackerman in Jacobs 30-33). School administrators need to not only support the program philosophically, but take real steps to empower their teachers in practical ways. Adjustments must be made in schedules, assessment methods, budgets, sometimes even physical plants. Administrators must also assume the task of public relations advocate, explaining, educating, and where necessary defending the program in the public forum.

A determined, carefully sequenced, support-building effort may be required to get a program off the ground or, especially if things do not go smoothly right away, to maintain it. The energy required for public relations and the likelihood of ultimate success must be calculated when deciding to pursue an interdisciplinary program (Ackerman in Jacobs 32).

The second important factor for successful implementation is a commitment to concept and teamwork. Participating teachers must "buy in" to the idea and be willing to work together toward their common goals. This means that subject teachers must loosen their strangle

hold on their discipline, and be open to new ideas and change. They must be able to filter their knowledge through the theme and in many cases restructure their whole teaching methodology. This can be frightening and threatening to some teachers, and often proves the biggest barrier to success, especially in mandated programs (Brophy 66). Jacobs uses the metaphor of marriage to illustrate the importance of this issue. "Good teams like good marriages are voluntary" (Jacobs in Brandt 26). Throwing people together, who are not ready to work with others is counterproductive because of the time and energy that this dynamic can siphon away from the business at hand.

Thirdly, adequate meeting and planning time must be afforded team members, in order to facilitate the development of both individual input and coordinated effort. Teachers in this type of program must meet on a regular basis during which time they develop a concept, decide on objectives, examine and evaluate progress, discuss and schedule events, divide tasks, and take care of details. Planning is time consuming and expensive but it is also crucial, particularly for a first time effort (Drake 20). However, once the logistics and organization of this planning time have been established and utilized a time or two, the planning process flows much more easily, and is often one of the most rewarding aspects for teacher participants (Vars 32).

Finally, and in conjunction with the planning factor, the fourth element that various methods seem to have in common is the presence of a program coordinator, a individual who will act as a meeting chair-person, a resource and logistical facilitator, schedule maker, and liaison within the team itself, and with administrative personnel. This person can be a member of the administration itself, but is most often not. As I stated in the first chapter, often the job is filled by the school media-specialist or librarian, although curriculum coordinators or teaching team leaders have also been utilized. It is this individuals job to keep the program on track and focused (Vars 49). It is also their job to take care of the scheduling of special events such as guest speakers or field trips, organize exhibits, locate and distribute appropriate resources, coordinate special contributors, advertise the unit, and generate curiosity and enthusiasm.

Selecting the Theme

According to Judi Zitkus-Lillie, a staff developer for Buena Regional Schools, there are three parts to the development of an integrated unit: choosing, planning, and managing (Integrated Thematic Instruction 7). Most experts agree that choosing an appropriate theme is basic to the success of a program, but there is much dissention as to the appropriate way to do so. Many believe that it

is the students themselves, either alone or in groups, who should develop the theme (Beane 10-13), since one of the stated goals is to develop a curriculum which is relevant to students needs and concerns. Others caution that students are unaware of curriculum requirements or mandates, and therefor, it is safer and more practical for the teaching team to develop themes that directly relate to those factors (Jacobs 37-38). Still another selection method suggests a combination of both, where students are polled at the beginning of the year to determine their interests and concerns, and the teaching team uses these results to develop units around those questions (Refer to Appendix pp. 56-58).

Whatever method is used, central themes must be broad in focus, and adaptable to as many areas of study, concepts and skills possible (Zitkus-Lillie). Other factors to consider when selecting a theme are short and long term goals, desired outcome of the unit, subject requirements, and methods for assessing student performance, as well as duration and content of the theme. It is important to note here that all areas of a given curriculum may not fit into a particular theme and must be accommodated in a more traditional way (Jacobs 13-19).

Planning Strategies

After a theme has been selected, then the task becomes planning the content of the unit. Team participants working alone and together need to develop teaching strategies and experiences which focus students attention and challenge their thinking, expose them to new language and concepts, and enhance their understanding across subject areas. For teachers committed to the process this can be easiest and most creative part of the process (Drake 48).

An initial brainstorming session can open possibilities that would not have been considered previously. Curriculum outlines, a sequencing calendar, thematic webbing charts and thematic planbooks such as those developed by the Buena Regional Schools can help keep the unit in focus and perspective (refer to Appendix B p. 59-69). The central theme acts as a tool to provide organization, focus, continuity, and perspective to the process of integration. The planning process finds ways to channel this focus into connections which will help students build skills, see relationships and create understanding (Zitkus-Lillie ?).

The final part of the planning process is the development of assessment tools. Some of the alternative assessment tools such as anecdotal records, student portfolios, checklists, and contracts, as well as more traditional assessments can be useful in this situation.

Such assessment methods can help the teacher to accumulate evidence which back up their subjective observations of the learning process as well as the outcome. Commonly referred to as outcome-based education, it is based on the premise that it is the school that controls the conditions of student success. The idea of setting the criteria for success and then providing a variety of conditions, and experiences for them to achieve and demonstrate this success, has become increasingly popular in American education and seems particularly suited to the integrated curriculum (Spady and Marshall, 67-72).

Implementation and Evaluation

Finally, after all the brainstorming and planning it comes time to put the wheels into motion. The keyword for this phase is flexibility. Each situation, each school environment is as different as the people involved. What works beautifully in one instance may fall flat in another. It is important for teachers to maintain their sense of objectivity, keeping an accurate record of successes and failures so that a clear evaluation of the unit can take place upon its conclusion.

In the next chapter I will discuss my observations of an applied example of some of these methods and models currently being employed in the Margate Public Schools.

CHAPTER 4

Model For Success

This chapter will focus on a successfully implemented integrated thematic curriculum program, which I had the pleasure of observing during several visits to the Teague Middle School in Margate City, New Jersey. Margate is a small coastal town just south of Atlantic City, which, due largely to an expanding casino industry, has grown from a summer resort area to a year round community. The school system has reflected this change and has grown from one school K-8, to two schools, an elementary and a new middle school. The community consists largely of middle to upper class citizens of better than average education who are generally interested and involved in the education of their children. The city also supports numerous business which contribute substantially to the public coffers. This availability of rateables, and the fact that a large number of taxpayers are still summer residents whose children attend school elsewhere, combine to assure the schools of a sound financial base.

Pre-conditions

The school system has employed the whole-language method for several years now using the Houghton-Mifflin reading series. Due to the previously mentioned

expansion and the subsequent approval a early retirement option, the school system found itself in a position to hire a substantial number of new faculty. The decision was made at that time by the superintendent and principal of the new middle school to commit to an integrated curriculum format. The new faculty was hired with the understanding that they would pilot this new curriculum.

One of the new faculty was the media specialist who would serve as the coordinator and facilitator of the program, with the media center functioning as the hub for the planning and execution of activities. An agenda and plan of attack were written, schedules were adjusted to give the faculty ample planning time, an open and flexible schedule was instituted for the library/media center, and a budget was provided. Not only was the faculty thoroughly inserviced beforehand, but the school provided an evening of presentation and instruction for the parents of participating students during which the particulars of the concept were explained and the importance of parental participation explored. All of these factors combined to provide the necessary favorable groundwork conditions for a successful program.

Planning

The faculty participants selected to focus on two different model options mentioned in the previous chapter, namely interdisciplinary units and integrated

days. Theme selections came from a variety of sources such as the Houghton-Mifflin whole language series, professional print materials, current news events, even the Internet, and were chosen during the first planning session of each unit. During my observation visits, I witness students working on unit themes such as the Alaskan Iditerod, Roots, Operation Wildlife, Becoming and Experiencing, as well as integrated days like Puzzles and Solutions Day, Monopoly Tax Day, Museum Day and Earth Day.

There are from five to seven preliminary planning sessions held once each week before the unit is introduced to the students. These are conducted in the library by the media specialist, who serves as chairperson, as well as resource person, special events coordinator and committee secretary. If it is logistically impossible to assemble all of the involved faculty, including specials, enrichment, and in class support, at one time, two teams are formed with the media specialist acting as liaison between teams. The media special also meets with the principal at least once each week to update him on the progress of each group.

During the initial brainstorming session, once the theme is decided upon, ideas and connections are explored and one or two of the committee members agree to "own" the concept (euphemism used for taking primary responsibility for that particular theme). For example

for the Iditarod theme the math/computer, and the social studies teachers shared primary responsibility for the evolution and execution of the unit.

The second weeks session is devoted to developing subject area objectives, and matching up skills with those objectives. Teachers utilize a planning web (refer to Appendix C pp 70-71) to help them visualize subject connection and keep the process on track. During the week team members work independently, gathering resources and developing learning activities, which they share and discuss at the third session. Week four is devoted to deciding upon the length of the unit, creating a schedule of events, and dividing tasks. The schedule is finalized in terms of speakers, room schedules, student regrouping and any other logistical details. After this session a determination is made as to whether additional formal planning sessions are required. Staff members can also pass along and exchange ideas by means of a posting board in the planning room.

Evaluation and Assessment

Time is also made at the end of these planning sessions for "old news", that is, the on-going analysis of the current unit. Staff members share individual successes and failures, as well as critique group events as they are happening. These thoughts are recorded in a theme log kept by the media specialist, and are reviewed,

along with staff and student theme evaluations, during a final staff meeting at the conclusion of each unit. The teachers are also asked to evaluate themselves (refer to Appendix C p. 72-73) prior to this meeting in terms of teamwork skills and attainment of personal classroom goals. This helps to clarify the experience for team members and put it into the perspective of the schools general educational goals. The unit is then "recycled" or put into storage for the next time.

All theme materials, resource lists, logs, samples of students works, evaluations and comments are consulted and re-evaluated during a pre-planning session held during summer break. At this time a determination is made as to whether the unit or theme will be reinstated for the following year and if so what changes the committee would like to try to incorporate into the unit. New ideas are also explored during this session and committees are formed to work on the various projects. Teachers are compensated for their efforts so there is no shortage of staff to work on these new ideas. When the school year starts in September, the first unit is ready to go and subsequent units are well under way.

Student Reactions

The student response that I was able to observe was by and large extremely positive. Students enjoyed exploring issues from different perspectives and

approached different learning tasks with enthusiasm and interest. Those I spoke with particularly enjoyed the inclusion of the arts and computer technology into the picture. "Its not just the same old boring thing", said one young lady, "every day there's a new way to look at things". Another student commenting on the teacher involvement said, "They get so pumped... it kind of rubs off... everybody's working on the same thing, its like [belonging to] a club or something" (Teague Students).

Others like the guest speaker, class trip and special events aspects, which because of the availability of ample funding is not a problem. "Its one thing to just read about something in a book. But when you can see it or hear about it [first hand] it becomes more real" (Teague Students). Kids also loved the "integrated days" concept which are meant to be not only instructive but also fun. One such was Monopoly Tax Day, which was actually held on two consecutive afternoons around or on April 15th. Students were prepared for this event through a study of taxation in literature, social studies, science, language arts, and math. On the first afternoon teams of four students played monopoly, keeping careful ledgers of gains and losses. On the next day, students from each group calculated their gross income, and then their federal state and local tax, with the help of teachers, and parent volunteers. The outcomes were enlightening, surprising, and often hilarious. Students,

teachers, parents and administrators, were so delighted with the results, that Tax Day is now a much looked forward to annual event in the community.

Key Ingredients

As with any new program the Margate experiment is not without its problems. The program is still very much a work in progress, with many bugs to work out. Just the energy required to keep the program fresh and vital can be daunting, according to Valerie Hart, the schools media specialist. "Sometimes we have so many balls in the air, I'm amazed they don't all come crashing down on us" (Hart). But there seems to be a willingness among the faculty to work through the problems. That, combined with professionalism, a sense of the possible, and a sense of humor, is what keeps the program afloat. Strengthened by the financial, philosophical and practical support of the school administration, and kept on course by a talented, resourceful, and incredibly organized media specialist, this is a program that has all the key ingredients for success, and an exciting one to watch.

CHAPTER 5

Practical Application

The Mullica Township School

Mullica Township is situated in Atlantic County, between Egg Harbor City and Hamminton. It is a rural area bordered on the north by the Mullica River and located in what is known of as the New Jersey Pinelands. The township has very few rateables due in part to the Pinelands Act which prohibits most building in the area. Funding for the school comes almost entirely from property taxes. The adult population of the area, with the exception of a few wealthy families living in waterfront developments, consists, generally, of lower middle class workers, employed either in the trades, or in hourly wage jobs. The formal education of these people ended, for the most part, on or before high school graduation. The citizens of the township do, however, maintain a high level of interest and involvement in the education of their children. School functions such as parent teacher night, special programs, and PTA fund raisers are well attended and supported.

Mullica Township has a single school building which houses both the elementary and middle schools, K-8. Though they are treated as two separate entities, with separate principals and faculty, the schools share some

services and facilities such as lunchroom, counseling, gym, art, music, and library. The student body consists of roughly 830 children with high numbers of economically disadvantaged and minority students. Forty percent of the students qualify for free or reduced meals. One hundred and four students reside with another family under affidavit, and are technically homeless. However with systematic reforms over the past four years concentrating on reading, writing, math, and science, test scores have risen steadily into the high ninetieth percentile of the state's MLP (minimum levels of proficiency).

Four years ago the school board hired a new superintendent of schools whose mandate was to bring the school up to present day standards in terms of facilities, technology and curriculum at a reasonable cost. Since then a new wing has been added, technology grants have been received, and many new programs have been initiated. However, with the exception of a new middle school principal, curriculum director, art teacher, and librarian, the faculty of the school has seen few changes over the years. Many of the teachers are township residents, and some have been employed by the school system in excess of 20 or 30 years. As can be expected, change is looked upon by many in this group with suspicion. One major change in the curriculum has been the gradual introduction of a new whole language series which, as in the case of the Margate Schools, is by the

Houghton-Mifflin Company. This program, which was introduced in two grades at a time, starting with first and second, is now employed through the sixth grade. The introduction of the program into the middle school grades met with the most resistance, as it modified much of the traditional, junior high school, single subject boundaries. Teachers, who considered themselves purely math or science teachers, found themselves responsible for language and reading. Although it has been a struggle, the teachers now seem resigned to the change and are trying to make the best of the situation.

Changes in the Media Center

I was hired as the school library/media specialist at the same time as the superintendent. It is my understanding that prior to my arrival at Mullica Township the school had no fewer than ten full or part time librarians in the previous fifteen years. In all probability, one of the primary reasons for this turn over is the fact that the teaching schedule for the librarian was so full that there was little or no time for the necessary administrative work. All students K-8 were scheduled into the library once each week for class while their teachers had their prep period. There was also no flexible time when the library was available for teachers to bring classes in for special projects. This situation was alleviated somewhat when seventh and eighth grades

were eliminated from the schedule, but lack of time is still a problem.

My first task was to weed and computerize a seriously antiquated collection. This was followed closely by the installation of some information technology with a six CD-Rom tower which will eventually be networked throughout the school. In-servicing of staff and students to the operation and use of this technology has been an ongoing process. At the same time, I worked on developing a library curriculum and collection which would more closely correlate to the new whole language program. The focus of this new curriculum concentrated on retrieval and research skills and was centered around the various themes being covered in class. One of the skills that I found sorely lacking among students was the ability to use reference materials effectively. I set as one of my personal goals, the introduction of these skills in the early grades and their gradual development and refinement through the grades. Last year the curriculum director, upon observing what I was trying to accomplish, approached me with the concept of the integrated curriculum.

Initiating an Integrated Curriculum

Although I was familiar with the concept of the integrated thematic unit through my course work in curriculum, I was ignorant as to the specifics. With the guidance of the curriculum director, I began to inform

myself through literature, workshops and observations, the results of which I have just delineated. The goal was to start a fairly extensive integrated program in the '95-'96 school year. However, we decided to have one trial run at the end of the previous school year.

I chose to focus on a fourth grade theme of Laura Ingles Wilder and attempt to use that theme to develop a project on western pioneers. The unit would culminate in a "Pioneer Day" during which students would display the fruits of their labour for parents, teachers and other students to see. I chose this grade and topic for several reasons. Firstly, fourth graders have the ability to bring a great deal of enthusiasm and excitement to anything new and different, which would add momentum to the effort. Secondly, it was my feeling that the fourth grade teachers worked especially well as a teaching team, and had actually already coordinated a similar effort, on a smaller level, the previous year for a grandparents day program. I felt that I could count on their cooperation, and involvement.

The Pioneer Project

Because of our individual schedules, there was only one possible period during the week when I could meet with the fourth grade teachers, and there was no single period when all the specials teachers were free at the same time. And so began a sort of tag team planning arrangement,

whereby I would meet with the classroom teachers, set up the initial concept, touch base with the specials, and then report back to the grade level team. This was a very inconvenient planning strategy, but because of the fact that we all had scheduled classes with one prep period per day, there seemed no other alternative. Besides the classroom teachers, and myself, the entire teaching team included art, music, physical education, and enrichment.

Notices were sent home, along with a brief description of the concept and goals, suggestions for individual topics and the date of Pioneer Day (formal invitations were sent out later). These notices were signed by a parent and that portion returned to the teacher. The project particulars were as follows:

Classroom - The literature of Laura Ingles Wilder's Little House Series were read by the students, along with a discussion of her life and times. Students kept short diaries of the events from the stories as if they were one of the characters. They calculated distance and time, studied the geography, both political and physical, of the west, took the challenge of the Oregon Trail computer program, and explored the technology, or lack of it, that effected the life of a pioneer.

Library Class - Students chose one individual aspect of the pioneer experience (some suggestions were schools, daily chores, Plains Indians, houses, forts

or towns, etc.), and locate information on their specific topic. Working alone or in groups, students were to write a one page information paper on their topic and create a visual aide, to be displayed or performed on Pioneer Day. Visuals could take the form of posters, diagrams, models, plays or demonstrations.

Art Class - In this class students explored elements of form, composition, color and texture to create a square for a class quilt. Each students square represented the theme that he or she chose for their report in library. The squares were then assembled into the finished quilts which were hung in the library for Pioneer Day and subsequently hung in the town hall and the regional library. The finished quilts were quite spectacular and the students were extremely proud of their work.

Physical Education - Students learned traditional American folk dances such as the Virginia Reel, a square dance, and something called slap'n leather. After formal presentations were completed on Pioneer Day, furniture was pushed back and an old fashioned "social" was held. The dances were performed and then taught to the audience of parents, teachers and administrators. A fun time was had by all.

Music - Students were introduced to various kinds of folk music and the instruments that were used to play

them. Since the father in the Little House stories played the fiddle, the teacher had a violinist friend demonstrate the instrument to the classes, playing both classical and folk tunes for the children. The students also learned several vocal selections such as "Sweet Betsy from Pike" which were performed camp fire style on Pioneer Day.

Enrichment - Students wrote and performed a play on the life of Laura Ingles Wilder based on her stories, letters and diaries. We opened the festivities on Pioneer Day with this effort because it set the tone for the rest of the presentations.

Integration Becomes Part of the Curriculum

Pioneer Day went so well, with mostly positive feedback from all those involved, that it was decided by the two school principals that each grade level from third thru sixth should participate in two such projects during the next school year. My own feelings were that this was too ambitious a goal, for several reasons. First of all, since our school is so large and includes so many grade levels, teachers of special subjects were already spread very thin. The time and effort required for each theme project would be overwhelming. Secondly, since each teacher is only allotted one prep period per day while students are at their specials, there would be little or no time when all members of the team could meet for

planning sessions. Thirdly, all of the literature on the subject recommends going slowly in the beginning of this venture in order to avoid burn out and afford the executed programs every chance of success.

The resulting compromise was that there was to be one major integrated thematic unit where all of the specials would be involved, and one smaller project where only the classroom teachers and the media-specialist would participate. There was to be at least one planning session for each group during the summer, so that goals could be set, themes chosen, target dates established, and individual focus suggested. These meetings never materialized due to financial constraints. In the beginning of the school year I tried to touch base with each teaching team in order to accomplish at least some of those objectives, however, my own schedule was such that coinciding free time with at least two of the teams was not available.

In October I was given a small block of time during an inservicing day in order to discuss integration with the faculty, but I was also expected to demonstrate the latest developments in technology at that time. During this session many faculty members expressed their concern that the program was off track and that the administration was focussing on only the performance aspects, the "dog and pony show" as one faculty member put it. Others expressed their concern that too much work was going to

fall on their shoulders and that once we completed a project, it would be written in stone that it be repeated year after year. To some extent these points were entirely valid. As a result, I began to scale down many of the programs and, in one case, have actually abandon any attempt to coordinate integration. I also expressed my concern and dismay to the administration over the intense focus that was being placed on performance and display for parents. This aspect clearly spooked some of the teachers and at this early stage of the game was unnecessary if not unwise.

In spite of the formidable road blocks, however, several of the faculty who found the concept exciting and worth perusing have persevered. Around Christmas, the sixth grade finished a project on Ancient Egypt and created an impressive "museum" for the other students to view. The fifth grade completed a unit connected with the book "The Sign of the Beaver" about survival among the Eastern Woodlands Indians, and are currently working on a space and technology project. The fourth grade constructed a giant prehistoric time line that wound around the hallways in the fall, and are currently working on the Pioneer Project which we decided to try again with certain changes.

Assessment of the Program

In my judgement the integrated thematic unit program in the Mullica Township school has been only moderately successful. This is due to several factors among which are; lack of proper teacher and parent in-servicing, a serious shortage of adequate planning and coordinating time, miscommunication and misunderstanding of goals and objectives by administrators, lack of financial support, lack of support among some faculty members who do not "buy in" to the concept, and disillusionment among team members who feel overwhelmed by the job being asked of them.

Certainly the lack of planning time has been a major deterrent to communication, coordination, and morale. Expectations on the part of the administration are in many cases unrealistic and often miscommunicated. At one point teachers were told at the last minute that they were to have their projects on display for parent/teacher night, which placed an undue burden for what was supposed to be a minor project. One cannot but expect teachers to react in a hostile fashion when these kinds of things occur. In one instance teachers were so upset by these unrealistic expatiations placed upon them that they threatened to grieve the matter with the union.

It is my intention, as nominal coordinator of the program, to draw up an assessment of the program in general, and, with input from my colleagues, of the strengths and weaknesses of each specific thematic unit

attempted, for presentation to the administration at the year's end. One of my recommendations will contain a suggestion that the administration, curriculum coordinator, the media specialist and a representative teacher sit down and draw up a list of goals and expectations for next year's program, explaining exactly how much focus and attention is to be placed on each theme. I believe that in spite of the negative factors mentioned above, this year's program has produced some exciting and creative learning situations. Students remain generally enthusiastic, and eager to participate. Seeing the obvious pride with which students display the fruits of their labors, leads me to the conclusion that the program, with specific adjustments, is well worth salvaging.

CHAPTER 6

Conclusions

Need for Change

A great deal of attention these days is being focused on the need to re-design our school curriculum to meet the requirements of the coming century. Educators are once again seeking ways to help students deal with momentous technological advances and the ever mushrooming body of information. It seems self-evident that students must learn to access, analyze, and synthesize data into manageable and meaningful and useful information, rather than become storehouses of small bits and pieces of data. One way to accomplish this is by helping students see the connections and relationships abundant in life's experiences, to see the whole picture rather than a small portion of it. Arguably, the way to accomplish this is by adopting a curriculum that allows for as many of these crossconnections as possible. The integrated or interdisciplinary type of program that has been explored in this thesis, is one approach that addresses this theory in an interesting and unique way.

Common Elements

Of the various methods and models that have been suggested for implementing an integrated program, several common factors stand out as key to the success of such an

effort. First, there must be real support and commitment for the program at all levels of the school administration. Administrators must not only agree with the concept philosophically, but they must assume the task of explaining and, when necessary, defending the program in the public forum. They must also empower their teachers by providing the logistical necessities required for successful implementation. It is not enough for administrators to approve of a project and then rely on staff to work around roadblocks such as scheduling and financing. Reform on this scale must have the confident backing of an administration with vision.

The second ingredient for a successfully integrated program is a commitment to teamwork. Participating staff must "buy in" to the concept, and be willing to work closely with others toward a common goal. This means that subject teachers must loosen their strangle hold on particular disciplines and established agenda, and filter their expertise through the team. It also means that teachers commit to the concept and are willing to work hard to make it succeed. Teachers who are forced into participating can bring an understandable reticents and resentment which will only sabotage the process.

Thirdly, adequate meeting and planning time must be afforded team members in order to facilitate the development of both individual input and coordinated effort. Teachers must be given time to meet on a regular

basis in order to develop concepts, decide on objectives, examine and evaluate progress, schedule events, delegate tasks, and coordinate efforts. Adequate time must also be provided for the necessary independent work of developing activities, gathering resources, and inventing assessments. Without adequate time for development and coordination, programs can lose their focus and become disjointed and less effective.

The final element that seems to be essential to successful implementation is the involvement of a coordinator, or team leader, to schedule and chair meetings, arrange for special events and resources, advertise units, communicate with administrators, coordinate special contributors, and generate curiosity and enthusiasm for the program. Whether that individual is the school media specialist, a curriculum coordinator, a classroom teacher, or an administrator, their presence seems to be vital to keeping the process moving forward and on track.

Role of Media Specialist

Having just listed the likely candidates to fill the coordinators chair, I must state here that it is my belief, based upon reviewed literature and personal observation, that the best person to assume this role would be the school librarian/media specialist. According to Information Power, the mission of the school

library media specialist is to "ensure that students and staff are effective users of ideas and information" (p.1). In order to perform this mission effectively, the media specialist must be knowledgeable of both the curriculum for each grade level as well as materials available to support that curriculum. Also the media specialist is in the unique position of having almost daily contact with all the teachers and students and administrators in the school, giving her a familiarity that others do not have. The library facility itself, in addition to being a central resource center, is also usually a pleasant, spacious, and neutral area in which to hold necessary planning sessions.

Once again, certain pre-conditions must exist to enable the media specialist to function as both school librarian and program coordinator for an integrated curriculum. The key elements are time and flexibility. If the library is rigidly scheduled with assigned weekly classes, as is often the case in schools that list "library" as a teacher prep special, the coordinator is sabotaged in several ways. First, when the various grade teachers are having their scheduled preparation period, a time when they could be meeting with the coordinator, the librarian is usually teaching one of their classes and therefore unavailable. Also, there is no possibility of using the library facility during a given block of time for planning, presentations or special events since it is

almost always in use. In addition, the once per week, forty-five minute class block of scheduled library time, is extremely counter-productive to effective student research. Projects drag on for weeks sometimes months, with students becoming distracted, disinterested, and frustrated, because of the inaccessibility of the facility and the materials. In short, when a school decides to proceed with an integrated curriculum, with the school librarian as coordinator, the library program itself must be re-evaluated, and adjustments made.

Caveats

Establishing an integrated or interdisciplinary program is not without its caveats. One major draw back is our own lack of vision. All of us, teachers, administrators, and parents were probably educated in the subject isolated format that has been the hallmark of "higher learning". Education has been the same for so long that it is sometimes a struggle to imagine anything different. The misplaced nobleness that society and academe has attached to the ivory tower, purist pursuit of knowledge, has been fostered and reinforced by its institutions for the centuries. In fact, it is easier to teach subjects in isolation, which is why the paradigm has lasted. However, as critics of higher education have also pointed out for centuries, this is not the stuff of every day life. "Teachers will have to confront squarely

the difficult problem of creating a school environment that is fundamentally different from the one that they themselves have experienced" (Sheingold, 23). It is time to re-invent the wheel.

On a more concrete level, another problem is the ever present thorn of performance assessment. How do we prove that our children are learning, and how do we assess that learning. The simplest method, the one in use since the beginning of formal education, has been the administration of tests. Students are tested constantly, at all levels and ages to determine some arbitrary level of competency. To the results of these tests are linked all kinds of ramifications, both for the child personally and for their educational environment. But testing assessments have been proven to be greatly flawed, as they only measure a very limited segment of the learning spectrum. If our schools are ever to move on from the old Industrial Age mode of education, so must our assessment of learning. Alternatives such as performance evaluation and portfolio assessment are gaining increasing popularity among educators, but are highly subjective and therefore vulnerable to challenge.

Agent for Change

The onus for change in this arena, unfortunately, must come from the agencies that ultimately control funding and certification, namely, government. School

districts which pioneer the reforms that society requires, must not have to live in fear of political reprisals from those in power. Much is being said these days about the establishment of national educational standards (Goals 2000). The idea of setting a criteria for success and then providing whatever is necessary for all children to achieve that success is deceptively simple, but the appropriate mechanism for objective measurement of demonstrable learning success is still very much an issue for debate. Still others feel that the government should not be involved in education at all. Until these issues are resolved, I fear, educational reform of any kind will languish, an easy target for any special interest group that seeks to further its objectives by appealing to fears of falling test scores.

Evolve or Perish

If our children are to ever catch up and compete in the global economy of the future, the educational system as we know it must evolve. "Today almost none of our students are doing high quality work in their academic classes" (Glasser, 426). Implementing a curriculum in which time and resources can be utilized flexibly and naturally, in which students learn to explore issues, ideas, and problems from a spectrum of perspectives, in which the accession of data is only the beginning of the

quest for knowledge, and where students are given more than "one, uniform, routine chance to receive needed instruction, and to demonstrate their learning successfully" (Spady & Marshall 70), seems a logical place to start. Only when education rises out of its comfort zone of pre-designed absolutes, and starts dealing with the educational needs of students and their society, will we begin to prepare them to become productive participants in that society, participants who are equipped to face the challenge of the coming century with confidence.

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APPENDIX A

Students' Interest and Concerns

The Way I Am

Name _____ Date _____

I have a collection of: (Check the ones you collect.)

- | | | |
|-----------------------------------|---------------------------------|--------------------------------------|
| <input type="checkbox"/> coins | <input type="checkbox"/> models | <input type="checkbox"/> cards |
| <input type="checkbox"/> stickers | <input type="checkbox"/> stamps | <input type="checkbox"/> rocks |
| <input type="checkbox"/> marbles | <input type="checkbox"/> horses | <input type="checkbox"/> shells |
| <input type="checkbox"/> bugs | <input type="checkbox"/> dolls | <input type="checkbox"/> other _____ |

I belong to (a team, group, or club) _____

I take _____ lessons.

I can play this musical instrument: _____

I like to _____ at home.
_____ at school.
_____ with my friends.
_____ by myself.

I know a lot about _____

I'd like to learn more about _____



Inquiry Survey

1. I am . . .
2. I wish I knew why . . .
3. I wish I knew more about . . .
4. I wonder . . .
5. I am curious about . . .

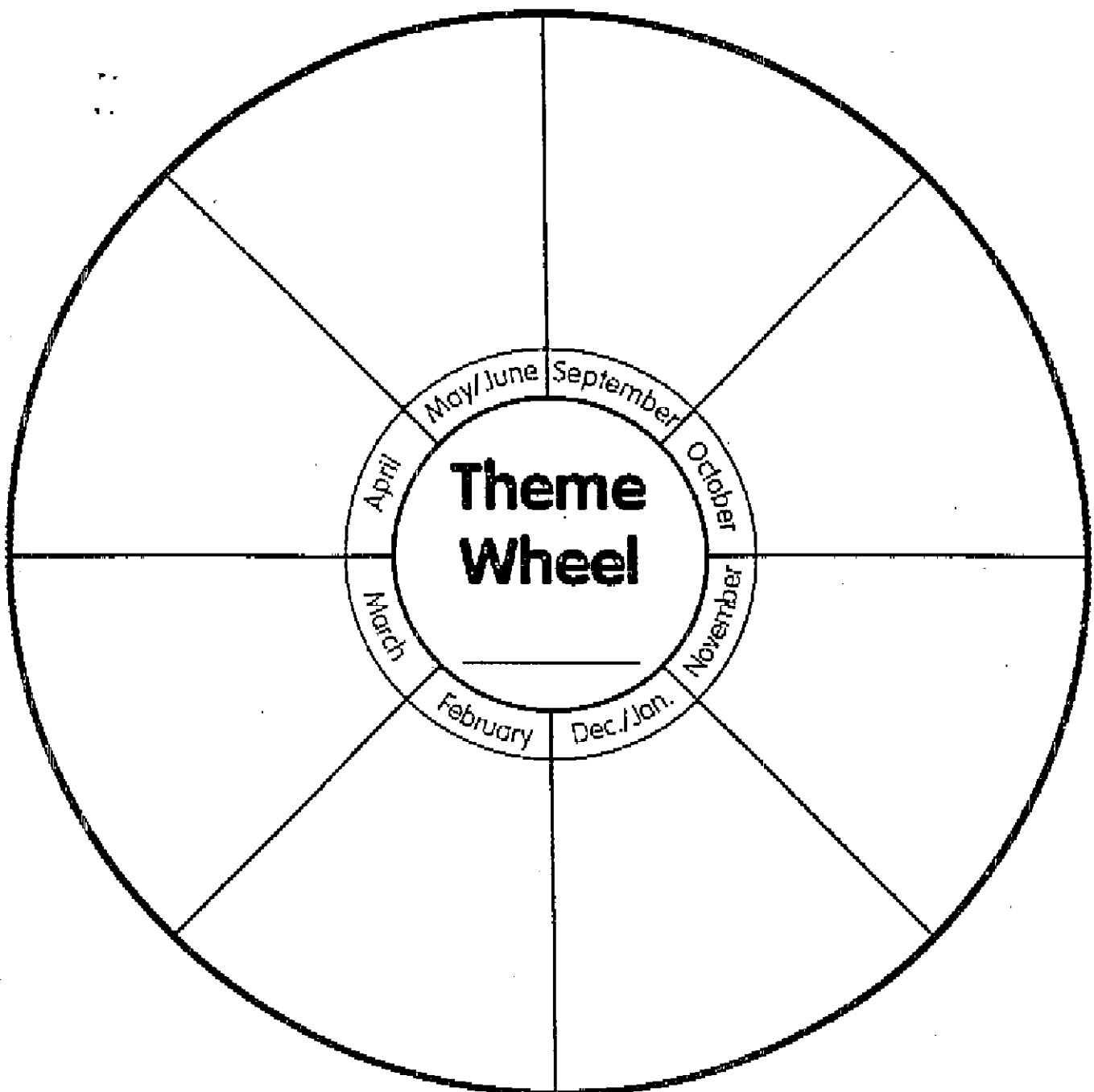
APPENDIX B

Planning Tools

The Year In Themes

Once you have defined the subject area goals for the year, and organized skills needed to achieve those goals on a sequence and pace calendar, it may help to visualize a time schedule of the themes you will use to complete curriculum objectives.

A theme wheel will provide you with an "at-a-glance" view of possible themes.



Yearly Curriculum Goals

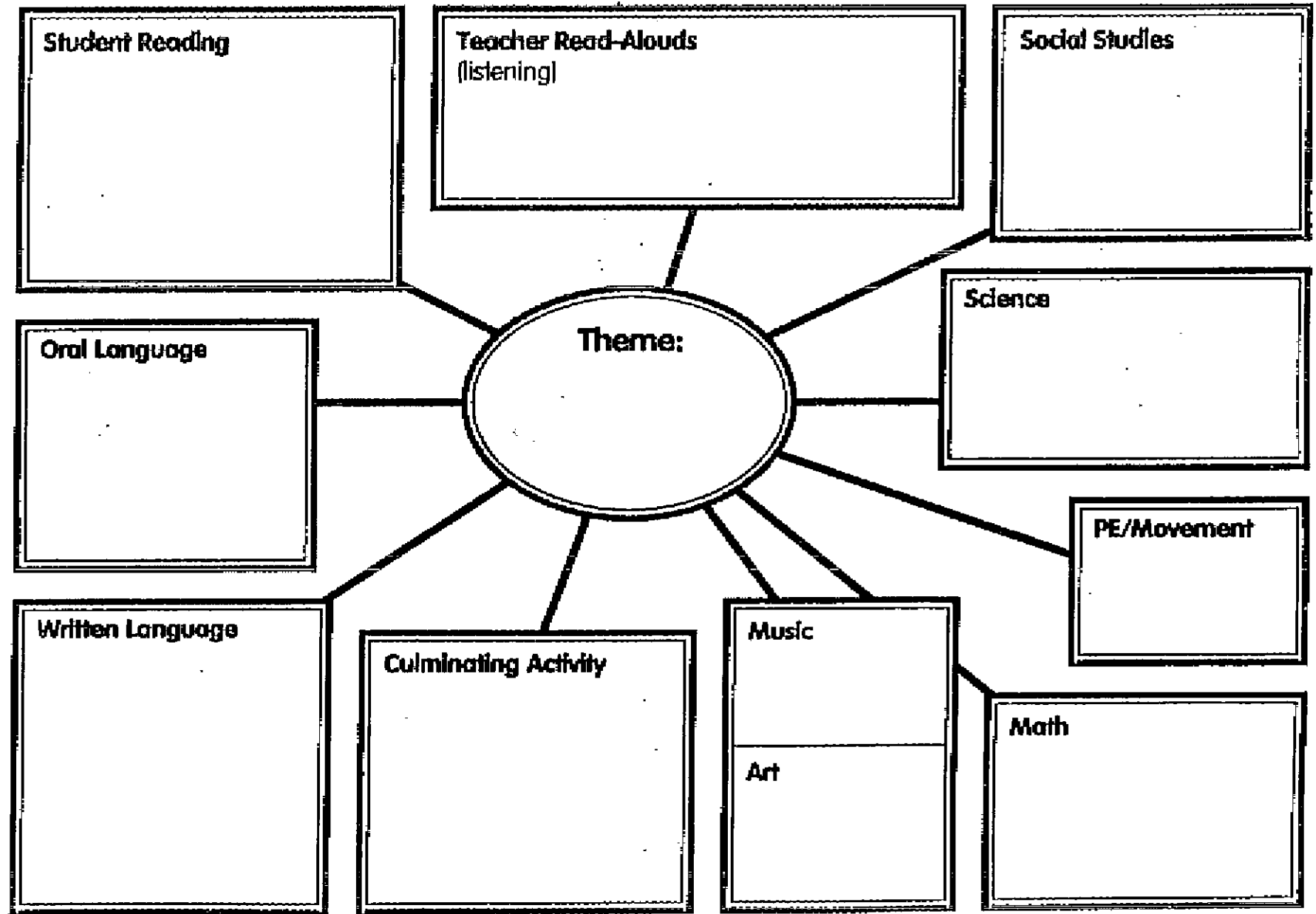
Language Arts		Math	
Subject	Skills	Subject	Skills
Social Studies		Science	
Subject	Skills	Subject	Skills

Skills Map

Theme:

Skills Already Attained	Skills To Be Taught (Thematic Activity)	Assessment Tools

Planning Web



Form for Putting It All Together

Theme: _____

Area

Content

**Reading/
Writing/
Speaking**

**Social
Studies**

Math

Science

Art

Music

Form for Putting It All Together *(cont.)*

Grade Level: _____

Skill

Assessment

Brainstorm Form for Unit Activities

Teacher Read-Alouds
(including Poetry)

Oral Language

Student Reading

Written Language

Brainstorm Form for Unit Activities *(cont.)*

Social Studies

Science

Math

Physical Education

Brainstorm Form for Unit Activities *(cont.)*

Art

Music


Culminating Activity

Thematic Plan Book

Morning

Afternoon

Monday	Activities: Objective(s): Evaluation:	Activities: Objective(s): Evaluation:
Tuesday	Activities: Objective(s): Evaluation:	Activities: Objective(s): Evaluation:
Wednesday	Activities: Objective(s): Evaluation:	Activities: Objective(s): Evaluation:
Thursday	Activities: Objective(s): Evaluation:	Activities: Objective(s): Evaluation:
Friday	Activities: Objective(s): Evaluation:	Activities: Objective(s): Evaluation:

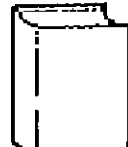
Student Reading 

Black Star Bright Dawn
Scott O'Neil

Stone Fox

Various magazine articles


Planning Web

Teacher Read-Alouds (listening) 


Kiana's Iditarod - Shelley Gill

Eskimo Boy

Dog Song - Gary Paulsen


Social Studies 

Alaskan geography
Alaskan history
Iditarod history
Eskimo culture
using a globe + maps
finding latitude + longitude

Oral Language (speaking) 

presenting short bios of mushers


reporting on mushers' race progress


Science 

tundra, permafrost
Arctic plants + animals
diphtheria + serum
frostbite + remedies

Iditarod

Physical Education

Iditarod race
telemark 


Written Language 

writing haiku poems


writing letters to mushers

writing imaginary musher journal entries


writing class newsletter

Culminating Activity 

follow mushers' progress in actual race, track times on class chart and move pegs along wall map of race-course

Music 

Eskimo songs?

Art 

Eskimo crafts

Iditarod badges

mobiles

building an igloo

Math $- + \div \times$

Iditarod word problems =


Graphing populations + distances + temperatures

Estimating distances + times


Averaging distances + times

Planning Web


Japan
The master Puppeteer
by Katherine Paterson

Student Reading 


The Master Puppeteer
by Katherine Paterson

Social Studies 


- Japanese geography
- Japan's role in WWII
- Japanese in America

Teacher Read-Alouds (listening) 


Tree of Cranes
How my Parents Learned to Eat
Sadako and the Thousand Paper Cranes

Science 


- cranes
- paper-making
- atomic bomb
- leukemia

Oral Language (speaking) 


- Country report presentations
- Haiku recitations
- teaching games to classmates
- counting in Japanese

Physical Education 


Japanese dances
Japanese games

Written Language 


- letter to boy in Tree of Cranes
- letter to Sadako
- original Haiku writing
- Japanese American diary entries

Culminating Activity 

- Japanese festival day
- Haiku poetry reading
- Japanese books of numbers

Music 

Japanese instruments

Art 

- puppet-making
- origami
- Japanese gardens
- Japanese dolls

Math $- + \div \times$

- word problems =
- recipes - measurements multiplication

Goals for Personal Development As Team Member

This form will help you think about your relationships with others and your skills in teamwork. It also will give you a chance to set your own goals for development.

1. Read through the list and decide which items you are doing all right on, which ones you should do more often, and which ones you should do less often. Mark each item in the appropriate column.
2. Some aspects of group interaction that are not listed may be more important to you than those listed. Write in such aspects on the blank lines.

	Doing all right	Need to do it more	Need to do it less
<p>Communications Skills</p> <ol style="list-style-type: none"> 1. Talking in the group 2. Being brief and concise 3. Being forceful 4. Drawing others out 5. Listening alertly 6. Thinking before I talk 7. Keeping my remarks on the topic 8. _____ 			
<p>Observation Skills</p> <ol style="list-style-type: none"> 1. Noting tension in group 2. Noting who talks to whom 3. Noting interest level of group 4. Sensing feelings of individuals 5. Noting who is being "left out." 6. Noting reactions to my comments 7. Noting when group avoids a topic. 8. _____ 			
<p>Morale-building Skills</p> <ol style="list-style-type: none"> 1. Showing interest 2. Working to keep people from being ignored 3. Harmonizing, helping people reach agreement 4. Reducing tension 5. Upholding rights of individuals in the face of group pressure 6. Expressing praise or appreciation 7. _____ 			

GOALS (continued)	Doing all right	Need to do it more	Need to do it less
<p>Problem-solving Skills</p> <ol style="list-style-type: none"> 1. Stating problems or goals 2. Asking for ideas, opinions 3. Giving ideas, opinions 4. Evaluating ideas critically 5. Summarizing discussions 6. Clarifying issues 7. _____ <p>Emotional Expressiveness</p> <ol style="list-style-type: none"> 1. Telling others what I feel 2. Hiding my emotions 3. Disagreeing openly 4. Expressing warm feelings 5. Expressing gratitude 6. Being sarcastic 7. _____ <p>Ability to Face and Accept Emotional Situations</p> <ol style="list-style-type: none"> 1. Being able to face conflict, anger 2. Being able to face closeness, affection 3. Being able to face disappointment 4. Being able to stand silence 5. Being able to stand tension 6. _____ <p>Social Relationships</p> <ol style="list-style-type: none"> 1. Competing to outdo others 2. Acting dominant toward others 3. Trusting others 4. Being helpful 5. Being protective 6. Calling attention to myself 7. Being able to stand up for myself. 8. _____ <p>General</p> <ol style="list-style-type: none"> 1. Understanding why I do what I do 2. Encouraging comments on my own behavior (feedback) 3. Accepting help willingly 4. Making my mind up firmly 5. Criticizing myself 6. Waiting patiently 7. Going off by myself to read or think 8. _____ 			

GLOSSARY OF TERMS

- Complete Program Design:** Students live in the school environment and create the curriculum out of their daily lives (Jacobs 18).
- Connected Model:** Course content is connected from topic to topic, within each subject area (Fogarty 61).
- Crossdisciplinary:** Viewing one discipline from the perspective of another; for example, the history of math (Jacobs 8).
- Discipline-Based Content Design:** No attempt is made for integration (Jacobs 14).
- Discipline Field:** A specific body of teachable knowledge with its own background of education, training, procedures, methods, and content areas (Jacobs 7).
- Fragmented Model:** Traditional model of separate and distinct disciplines (Fogarty 61).
- Immersed Model:** Student filters all content through a personal lens of interest and expertise with little or no outside intervention (Fogarty 64).
- Integrated-Day Model:** Full day programs based on themes or problems emerging from a child's world (Jacobs 17).
- Integrated Model:** Interdisciplinary topics are arranged around overlapping concepts and emergent patterns and designs (Fogarty 64).

Interdisciplinary Design: Periodic units of a specific duration which deliberately bring together the full range of disciplines around a theme or problem in order to provide a full range of perspectives (Jacobs 16, Drake 38).

Multidisciplinary Design: The juxtaposition of several disciplines focused on one problem or theme (Jacobs 16, Drake 35).

Nested Model: Multiple dimensions of a single subject are explored, taking advantage of natural connections and relationships (Fogarty 62).

Networked Model: The learner directs the integration process, targeting necessary resources across areas of specialization and filtering them through a self directed exploration of a topic (Fogarty 65).

Parallel Discipline Design: Teachers sequence lessons in the same area as other subjects (Jacobs 15).

Pluridisciplinary: The juxtaposition of disciplines assumed to be more or less related; as with math and physics (Jacobs 8).

Sequenced Model: Topics or units, although studied separately, are rearranged and sequenced to coincide with one another (Fogarty 62).

Shared Model: Brings together two disciplines with overlapping concepts, which are team taught as one unit (Fogarty 62-3).

Threaded Model: Skills orientated approach to integration which "threads" thinking skills, social skills, study skills, graphic organization and technological skills throughout the disciplines (Fogarty 63-4).

Transdisciplinary: Beyond the scope of the disciplines. Starting with a problem and relating the knowledge from the disciplines (Jacobs 8, Drake 40-1).

Webbed Model: Uses a broad theme to integrate curriculum content and disciplines. The subject areas sift out concepts, topics, ideas and problems appropriate to that subject (Fogarty 63).

BIOGRAPHICAL NOTES

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Temple University, Philadelphia, Pa

B.S. Secondary Education/English, 1972.

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Mullica Township Schools, Elwood, NJ, 1992-present

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John B. Stetson Junior High, Philadelphia, 1972-

1979