

Regular Classroom Teachers that Differentiate
Instruction for Gifted Students:
Two Case Studies

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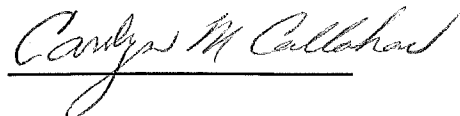
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ABSTRACT

Recent economic, political, and social pressures have impacted upon the way many localities identify and serve the needs of gifted students. Increasingly, there is a trend toward meeting the needs of the gifted in the regular classroom rather than pulling them out for special services.

Recent studies indicate that regular classroom teachers do not adequately meet the needs of gifted students (Archambault, 1993; Tomlinson, Tomchin, and Callahan, 1994; Westberg, 1993). However, some teachers are recognized for their ability to address the needs of the gifted in their classrooms. The purpose of this study is to investigate two regular classroom teachers who have received recognition for meeting the needs of gifted students in their classrooms. By studying their behavior, the researcher hopes to provide insights into how and why these teachers have learned to differentiate instruction for the gifted while also addressing the needs of a heterogeneous group of students.

A case study approach comprised of participant observation, narrative inquiry, and a series of in-depth interviews is used to understand how these teachers interpret and practice the art of differentiating instruction. The roles of biography, experience, training, attitudes, personal motivation, and professional growth are some of the areas that will be explored as the narrative unfolds. Each case study culminates with a personal narrative of the teacher. According to the guidelines of narrative inquiry, the narrative is complete when both researcher and participant agree that it accurately portrays the teacher and her craft.

The final chapters of this dissertation include a cross-case analysis and the conclusions of the study. These chapters link the teachers' narratives back to the literature on differentiation, reflect on the use of narrative inquiry as a research method, and provide insights into the ways researchers, administrators, supervisors, and teachers may work together to improve the art and practice of differentiating curriculum for gifted learners in the regular classroom.

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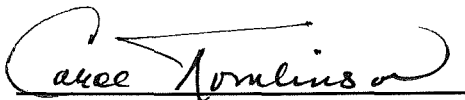
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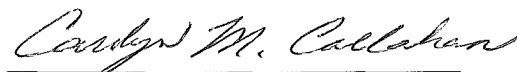
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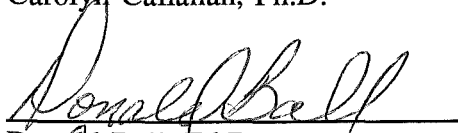
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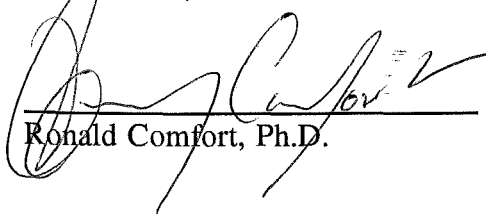
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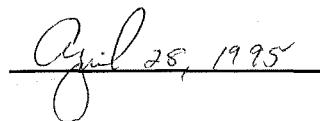
This dissertation, Regular Classroom Teachers that Differentiate Instruction for Gifted Students: Two Case Studies, has been approved by the Graduate Faculty of the Curry School of Education in partial fulfillment of the requirements for the degree of Doctor of Philosophy.


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To my son, Steve, for his understanding
of my need for time and solitude, and whose
constant love and spirit
for adventure
keep our household going.

To my parents who sacrificed
much to give me a solid foundation
and love of learning.

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She inspires me through her humor and humanness,
and her untiring dedication to her
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who have shared their thoughts,
frustrations, and visions about
schools and schooling with me.

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CHAPTER 1

The Problem

The responsibility for the education of gifted students is increasingly falling upon the regular classroom teacher. This is a result of the political, economic, and social atmosphere of the 1990's that is shaping the course of educational policy for gifted programs.

The absence of a clear federal mandate protecting gifted education leaves this field vulnerable to shifts in the economy and public opinion. No common set of policies and procedures exists among states for special programming for the gifted (Healey, 1986). Consequently, services provided to meet the needs of gifted students are largely a function of the state and community in which they live and attend school (Gallagher, 1986). For example, in a recent survey of certification requirements of teachers working with gifted students, 21 states reported having current certification and/or endorsement requirement for these teachers, while 25 states had none (Karnes and Whorton, 1991). Without the protection of a federal mandate, specialized gifted programs and staff become extremely vulnerable during times of fiscal crisis. Access to special services becomes restricted, particularly in poorer school districts (Irvine, 1991). Current state budget crises, which create competing educational interests, have led to the diminution or elimination of gifted programs throughout the country (Ross, 1991). The current social and political atmosphere also influences the fate of gifted programs.

Central to the social issue is the dichotomy of equity and excellence.

Verbalized by John Gardner (1961), Excellence: Can We be Equal and Excellent, Too?, this dichotomy has influenced the beliefs about giftedness held by experts, policy makers, and the general population (Cramer, 1991; Gallagher, 1991). As the nation looks for alternative strategies to meet the needs of less-advantaged groups, the generalization forming is that all ability grouping is "bad" (Oakes, 1985, 1990, 1992; Oakes & Lipton, 1992; Slavin et al., 1989). A recent example of this occurred in Prince George's County, Maryland, where policy calls for gifted seventh and eighth grade students enrolled in regular education courses to be grouped with other highly able students for English and social studies. David L. Smith, supervisor of gifted education for this county, reports that this directive is not being followed by some middle schools based on the belief that grouping by abilities places slower students in dead-end courses (Washington Post, 1992).

Yet educators supportive of special programming efforts for the gifted raise arguments for special grouping arrangements. It has been documented that students learn skills and concepts at a faster rate when grouping and individualizing take place (Kulik and Kulik, 1984; Slavin, 1984, 1986; and Madden, 1989), but teachers still use whole group methods as their primary means of delivering instruction (Cuban, 1982; Goodlad, 1983, 1984). Others acknowledge that teachers often find it difficult to plan and teach groups of students characterized by widespread variance in ability and achievement levels (George, in Gallagher, 1991; Renzulli & Reis, 1991).

Swift demographic changes in the 1980's and 1990's have led to a greater diversity in student backgrounds and abilities, contributing to a drive toward educational reform for the regular classroom. Some resulting pedagogical changes have had profound repercussions on the attitudes of administrators, teachers, and the community toward gifted programs. One such pedagogical change is the use of cooperative learning strategies, which are touted as an effective alternative to forms of grouping.

Cooperative learning has been defined as a set of instructional strategies which utilize "small teams of pupils to promote peer interaction and cooperation for studying academic subjects" (Sharan, 1980, p. 242). Groups are motivated by including goal interdependence with common reward structures, and students are heterogeneously assigned to groups for the bulk of the instructional time (Robinson, 1990). These groups usually follow a whole-class, teacher led lesson (Staff, 1992). Slavin (in Staff, 1992), estimates that nationwide, about 10 percent of teachers are using some form of cooperative learning. Slavin asserts that if used well, cooperative learning "...produces 'solid but not staggering' achievement gains and increases students' prosocial behavior (1992, p.2)." While the results might not be staggering, cooperative learning has been enthusiastically embraced by many classroom teachers. Rather than grouping students by learning needs, styles, and/or abilities and planning multiple avenues for student learning, teachers plan one lesson and use a group follow-up activity. Students are usually grouped heterogeneously within these groups with the idea that the bright students will help the slower ones. Robinson (1990) warns that this practice exploits

the talents of the gifted, while Feldhusen and Moon (1992) add that no research currently exists to indicate positive outcomes when cooperative learning strategies are used with the gifted.

A second pedagogical shift that has left its mark on gifted education in the United States is what has been termed "restructuring" education. Restructuring (David, 1991) differs from earlier reform movements in two key points: 1) It is a long-term commitment to fundamental change, and; 2) It is based on the premise that all students can and must learn at higher levels. These beliefs have emerged in part from business leaders' demands for the work-force of the future. More highly skilled jobs are replacing unskilled and semiskilled jobs, and satisfactory performance in the work place is dependent on the use of higher-order thinking skills (Cole, 1989). Brown (1991, p. 4) adds "...the ability to think critically and creatively, to solve problems, exercise judgment, access, assimilate, and apply information, and communicate effectively with others" to the list of job requirements for the future. Swartz (1986) stresses the use of observational learning to develop an understanding of causality and responsibility, while Marzano (1986) advocates learning preparation, content thinking, and basic reasoning skills.

Under the tenets of restructuring, learning becomes outcome-based and students must demonstrate mastery of knowledge, practical applications of that knowledge in a variety of contexts, and the ability to transfer learning to new situations (Fitzpatrick, 1991). Learning remains a developmental process, freeing the system of the need to "retain" students. The focus is on "...whether or not students achieve the essential

outcomes, not when they succeed" (Fitzpatrick, 1991, p. 19). Learning becomes much more individualized as students move at their own rates to achieve desired outcomes (Fitzpatrick, 1991).

The effects of restructuring on gifted education may lead to both positive and negative results. The emphasis on critical and creative thinking skills and on an individualized, developmental program could lead to greater teacher training in these areas, and more open-ended and outcome-based material for students. This could support arguments by leaders in gifted education for greater depth of content and skills for gifted learners. On the political and social fronts, however, there is less emphasis and funding for formal gifted programs, and questioning of appropriate grouping arrangements to meet the needs of gifted learners (Renzulli & Reis, 1991). In addition, students are being more heterogeneously grouped, with many special education students included in the regular classroom as well.

With the regular classroom becoming more diverse with the greater trend toward fewer special program arrangements, it becomes increasingly important that the needs of gifted students and other diverse learners be met in the regular classroom. In addition, most gifted students continue to spend the bulk of their time in the regular classroom. Therefore, further research is needed on teachers who do differentiate instruction for this population to determine if they can effectively and consistently meet their needs in this setting.

The focus of this study is to examine what happens when two notable regular classroom teachers teach gifted students. What factors enable them to differentiate

instruction for gifted learners? What factors impede their ability to differentiate instruction for gifted learners? As a result of this study, I hope to identify ways educators can help ensure that the needs of gifted students can be better met in the regular classroom. I also hope to provide further insights into how well the needs of gifted learners can be met in this environment.

The study is qualitative in method, using narrative reflection to develop two case studies. This method is chosen because it contributes to basic research by using an inductive approach that will help generate and confirm theory which will emerge from close involvement and direct contact with the empirical world of the teacher and the classroom (Patton, 1990). A case study approach will be used because the researcher is interested in insights, discovery, and interpretation rather than hypothesis testing. Before moving to the study itself, however, the literature in the field will be reviewed to answer the following questions:

- How do educators and/or researchers define a qualitatively differentiated curriculum for gifted learners?
- What strategies might be used in the regular classroom to facilitate the differentiating of instruction in this setting?
- Are there teachers currently using this information with gifted students in the regular classroom ?
- What factors in general might facilitate a teachers' ability to differentiate instruction?

Following this literature review will be a chapter outlining the study's methodology.

CHAPTER 2

Review of the Literature

The purpose of this chapter is to present a review of the literature in regard to appropriate curriculum for gifted learners and to outline the need to conduct research on why some teachers are able to successfully differentiate instruction for gifted students in the regular classroom. While no two gifted learners are alike, they possess similar characteristics that require a responsive curriculum in order to learn to their potential. These traits include the ability to handle abstractions, strong powers of concentration, the ability to make connections and establish relationships among data, the ability to memorize and learn rapidly, and propensity for multiple interests (VanTassel-Baska, 1989). School curricula that is organized for typical learners will not provide the depth, breadth, pace, and capacity for individualization necessary for gifted learners. Thus, for this study, it is important to understand the benchmarks of good curricula for the gifted, how this curricula might be delivered in the regular classroom, and the factors that might impact a teacher's ability to address the needs of this population in a heterogeneous classroom.

Defining a Qualitatively Different Curriculum

Because gifted learners vary in their strengths and areas of giftedness, there is no one definition of what constitutes a qualitatively different curriculum. What is common among definitions is that the curriculum should not be more work; instead, it

should reflect modifications that allow the student to find challenge and to excel in his/her area of giftedness. Maker (1982) notes four commonalities of qualitatively differentiated curricula. Such curricula:

- 1) build upon characteristics unique to gifted students;
- 2) include concepts at higher levels of abstraction or greater complexity;
- 3) emphasize the development of thinking skills at higher levels than acquisition and memory; and
- 4) provide administrative or other arrangements necessary to enable all pupils to utilize their full potential.

VanTassel-Baska (1992) advocates the utilization of discipline-based systems of knowledge, a focus on interest-based inquiry, provisions for accelerated learning opportunities, focus on issues, themes, and ideas within/across knowledge areas, creative opportunities that encourage risk taking, and emphasis on learning goals rather than performance goals. She, too, emphasizes the need for regular classroom teachers to modify curriculum to meet individual student needs and behaviors.

In translating the overall tenets of differentiation for the gifted into practice, it has become commonplace for educators to group modifications into content, process, product, learning environment, and affective categories (Maker, 1983). While these elements should overlap in practice, they provide a framework with which to observe and identify the types, levels, and frequencies of differentiation that occur in a classroom.

Differentiation of Content

Content has been defined as, "What is taught.. the ideas, concepts, or facts presented to the student" (Maker, 1982, pp. 19). Common characteristics of differentiated content advocated by experts include:

- Teaching of broad based issues, themes, and concepts (VanTassel-Baska, 1988)
- Accelerating and enriching concepts (Clark, 1992) and content (VanTassel-Baska, 1988)
- Providing organization and economy of curriculum (Maker, 1983)
- Stressing interdisciplinary relationships (Clark, 1992)
- Emphasizing abstract and basic concepts (Maker, 1983) in discussions, written material, classroom questions, assignments, homework, and lectures (Shore, 1991)
- Teaching ethics and value systems (Khatena, 1986)
- Teaching future oriented topics (Shore, 1991)
- Teaching investigative and in-depth research skills (Renzulli & Reis, 1985)
- Including microcomputers, career education, art, world affairs, global perspective (Shore, 1991) and study of people (Maker, 1983).

Differentiation of Process

The teaching of process skills is important for gifted learners because these skills are closely aligned with traits that characterize the essence of giftedness. Gifted learner characteristics include the ability to handle abstractions, strong powers of

concentration, ability to make connections and establish relationships among dissimilar data, ability to memorize and learn rapidly, and the proclivity for multiple interests and a wide information base (VanTassel-Baska, 1992). Process or methodology can be defined as the interaction between the learner and the material. Appropriate process skills for gifted learners challenges them to seek and use information critically and creatively, and helps to develop their independence as learners. Process skills important in instructing gifted learners include appropriately challenging levels of:

- Higher-level thinking skills to include critical and creative thinking (VanTassel-Baska, 1988; Maker, 1982; Clark, 1992; Renzulli and Reis, 1985)
- Research and reference skills (VanTassel Baska, 1988; Feldhusen, 1988; Clark, 1992; Renzulli and Reis, 1985)
- Inductive thinking skills (Maker, 1982)
- Metacognitive and decision making skills (Feldhusen, 1985; Clark, 1992); and,
- Self-directed learning (VanTassel-Baska, 1988; Maker, 1982).

Differentiation of Product

Products are one method to indicate learner outcomes. In the traditional classroom, products are usually written and emphasize tests, quizzes, and reports. When a teacher differentiates products for gifted learners, the following should be stressed:

- Real problems (Maker, 1982; Renzulli and Reis, 1985)
- Real audiences (Maker, 1982; Renzulli and Reis, 1985)
- Self-evaluation (Maker, 1982; Renzulli and Reis, 1985)

-Transformations (Maker, 1982; Renzulli and Reis, 1985).

Differentiation of Learning Environment

Learning environment refers to the overall atmosphere in which students learn. Maker (1982) states that the purpose of modifying the learning environment is to allow for the successful implementation of content, process, and product changes. In addition, changes in the learning environment should facilitate students' motivation to learn, interest in pursuing topics, and freedom to learn in a way that is meaningful and positive for the student. Specific modifications of the learning environment for the gifted should provide:

- Student choice in assignment (Barbe and Renzulli, 1975; Clark, 1992);
- Complexity rather than simplicity (Maker, 1982);
- Student centeredness (Maker, 1982) ;
- Responsiveness (Clark, 1992); and,
- Encouragement of divergent thinking (Barbe and Renzulli, 1975; Maker, 1982).

Differentiation of Affect

Characteristics of the gifted that need to be addressed through affective strategies include their unusual sensitivity to the expectations and feelings of others, a heightened self-awareness along with feelings of being different, idealism and sense of justice, and advanced levels of moral judgement (Clark, 1992). Curriculum that develops the affective processes of students is designed to help students understand themselves and their relationships with others, facilitate the development of a clearly

defined set of values, and help release students' creative potential (Barbe and Renzulli, 1975). Specific affective strategies are used to:

- Encourage emotional development (Clark, 1992)
- Encourage development of positive self-concept (Feldhusen, 1985)
- Develop leadership skills (Clark, 1992)
- Develop values and release creative potential (Barbe and Renzulli, 1975; Passow, 1988)
- Develop global identity (Clark, 1992; Passow, 1988).

Summary of Characteristics of Differentiation

Dissecting the curriculum and instructional process into the areas of content, process, product, learning environment, and affect helps us as educators to clearly define what a qualitatively different curriculum might look like in individual elements. In practice, however, these elements tend to overlap and inter-relate because good curriculum and learning is multidimensional.

In assessing differentiated instruction, a conceptual approach to teaching that allows students to make abstractions and connections, gives students opportunities for in-depth, independent work, and challenges students to develop creative solutions to real problems and present them to a real audience signals the presence of instructional routines appropriate for gifted learners. Providing such a curriculum within the regular classroom is no simple feat, and a number of researchers and practitioners have developed management strategies to facilitate the regular classroom teacher's use of differentiated instruction.

Differentiated Instruction within the Regular Classroom

VanTassel-Baska (1989) notes three important dimensions for appropriate curriculum for gifted students: (1) a content-based mastery dimension that permits students to progress more rapidly through the curriculum; (2) a process/product/research dimension that nurtures in-depth and independent learning; and (3) an epistemological concept dimension to promote the exploration of themes, issues, and ideas across curriculum areas. Within the regular classroom, teachers may use some of the following techniques to manage student learning for each of these dimensions:

Content Mastery Dimension

- A diagnostic/prescriptive approach to basic skills
- Pre-testing and acceleration of basic content
- Flexible grouping arrangements
- Tiered assignments

Process/Product/Research Dimension

- Student contracts to provide enrichment and/or acceleration
- Independent study
- Learning centers
- Questioning strategies

Epistemological Concept Dimension

- Integrated approaches to teaching; and,
- Curriculum organized around abstract issues, themes, and problems.

As before, these management strategies often overlap and interact, and teachers need to match the strategy to be used with the learning needs of the student, as well as the instructional situation. For example, a teacher who plans a whole group math lesson may differentiate for gifted math students by pre-testing and then developing a learning center or independent study for students demonstrating mastery of main concepts. On the other hand, teachers using a developmental approach to reading may find it makes sense to use tiered assignments. These are assignments that reflect different levels of abstractness and complexity, yet can relate to the theme being studied. Gifted learners may be asked to complete assignments that require reading more difficult books and completing in-depth projects that demonstrate transformations of knowledge. Rubrics should be used to guide product development, to promote the integration of skills, and to develop student independence and self-assessment. Rubrics should also be tailored to individual learner outcomes.

At times, students identified as gifted in a specific area such as math or verbal reasoning may need a tailored program in these areas while participating with the rest of the class in other areas. For these reasons, a study of teachers who differentiate needs to note the match between specific learner needs and the degree of accommodations made by the teacher to address these needs. Embedded within the instructional routines characteristic of differentiation must be evidence of individualization to address the specific needs of gifted learners.

Individualizing for Gifted Learners

While differentiating curriculum demands whole and small group modifications such as focusing on issues, themes, and ideas across disciplines, instruction also needs to be individualized to address individual learner characteristics in order to be effective (Maker, 1982; VanTassel-Baska, 1992). Shore, Cornell, Robinson, and Ward (1991) remind us that more research is needed to identify the extent to which individualization is practiced with the gifted. They assert that individualizing is important to address student interests that are different from the norm and to provide opportunities for mentorship, individual exploration in the arts, and independent study. Curricular compacting or rapid pacing are two techniques that may be used to individualize instruction. Clark (1992) summarizes the difference between differentiating and individualizing instruction:

Differentiation is the preparation that is made for the curriculum to respond to the characteristic needs of gifted children, such as allowing for a faster pace of learning and choosing themes and content that allow for more complex investigation. Individualization is the process of adapting that curriculum to the needs and interests of a particular gifted student. A program requires both to be really successful (pp. 256).

The research on teachers' growth and change offers some insight into a teachers' ability to individualize instruction. Houser and Griffey (in Swanson, O'Conner, & Cooney, 1991) note that experienced teachers made more strategy decisions related to an individual student's performance during lesson planning,

whereas novice teachers generally focused their decisions on the entire class. Fuller (in Cohen, 1991) identified the final stage of teachers' development as the mature stage. Teachers who demonstrated attainment of this stage focused primarily on student concerns and student needs. Both instruction and discipline were individualized, and the overriding interest of the teacher was the quality of his/her rapport with students, parents, and administrators.

While individualizing, those identified as teachers in the current study need to demonstrate a command of pedagogy that allows them to establish instructional and managerial routines appropriate for gifted learners. Brandt (1986) comments that the expert teachers in his study possessed domain specific knowledge in content and pedagogy that enabled them to establish fluid routines with their class. These routines freed teachers to see beyond the obvious and enabled them to organize what they saw into meaningful patterns. To help teachers of the gifted effectively manage individualization, VanTassel-Baska (1992) recommends the use of learning centers, cooperative learning groups by abilities and interests, learning contracts, use of a diagnostic/prescriptive approach, Individual Educational Plan (IEP), daily learning agreements, and a mix of dyads, triads, and cluster groups.

Hanninen (1988) combined research in expertise and gifted education to analyze problem solving scenarios presented to novice and expert teachers of the gifted. The responses of the expert teachers

- * focused on student rather than teacher responsibility for learning;
- * used a theoretical base to organize recommendations;

- * saw the need to individualize student learning by using techniques such as mastery learning, compacting, advanced placement, and acceleration;
- * were specific in recommendations;
- * took students' interests seriously and gave suggestions for expanding interests beyond the regular school program; and
- * addressed student interests by enriching the curriculum with nonacademic topics, as well as extending these interests independently.

As evidenced by the literature, expert teachers of the gifted in the regular classroom go beyond differentiating instruction for groups of students to provide individual modifications to meet specific needs of gifted learners. These teachers have developed set routines that include such techniques as curriculum compacting, learning centers, use of a diagnostic/prescriptive approach, IEP's, and flexible grouping arrangements. Successful teachers of the gifted seek out opportunities beyond the school walls to meet students' needs. These teachers take their students and their studies seriously.

The Current Status of Differentiated Instruction

With greater emphasis being placed on serving the needs of gifted students in the regular classroom, it is necessary to examine how much and what type of differentiating is currently being practiced in regular classrooms across the United States. Westberg et al. (1993) concluded that in 84% of the instructional activities planned for third and fourth grade gifted students, no instructional or curricular

differentiation occurred. Differentiation in this study was coded by the observers as advanced content instruction, advanced process instruction, advanced product or project instruction, independent study with assigned topics, independent study with self-selected topics, or other differentiating experiences.

Grouping arrangements were also studied. During the majority of time in each subject area, students participated in whole group instruction. Across the five subject areas studied, they worked individually 12% of the time, and in small groups (2-6 students) 13% of the time. Across all five subject areas, homogeneous grouping for instruction was used 21% of the time.

Few differences were observed in the amount of differentiating occurring in regular classrooms between schools with and without formal gifted programs. Differentiation **did not** occur 84.1% of the time in the regular classroom in schools with formal gifted programs, and in schools **without** formal programs there was no differentiation 84.4% of the time. This study indicates that generally, teachers do not show much success in differentiating instruction to meet the needs of gifted students.

A follow up study was conducted during 1991-92 by The National Research Center on the Gifted and Talented (NRC/GT) at the University of Connecticut. This study, called Classroom Practices Used with Gifted Third and Fourth Grade Students (Archambault, 1993), was designed to draw upon and extend information gained from two previous studies conducted by the NRC/GT, the Observational Study of Classroom Practices (described above) and the Curriculum Compacting Study (Reis, Burns, & Renzulli, 1992). This qualitative study examined third and fourth grade classrooms in

schools or school districts with a reputation for effectiveness in meeting students' individual needs. Its purpose was to describe the successful practices used by classroom teachers to meet the needs of gifted students in regular classrooms. Some of the research questions that guided data collection at each site were:

1. What are the instructional strategies and curricular differentiation techniques used by teachers to meet the needs of gifted students in the regular classroom?
2. What factors contribute to classroom teachers' effective use of differentiated teaching strategies?
3. What environmental factors contribute to the effective use of differentiated teaching strategies?

General findings of this study indicate that while each school differed in its approach to differentiation and stressed different practices, some underlying commonalities were present. Most of the schools had strong leadership from the principal and/or resource teachers for individualizing instruction, a staff dedicated to developing and adapting curriculum to meet student needs, and an atmosphere that stressed high expectations for students and staff alike.

The preceding studies indicate that nationwide, few teachers are successfully differentiating instruction to meet the needs of gifted learners in the regular classroom. However, exemplary schools that differentiate for the gifted do exist, and there are teachers who can "pull it off" successfully. The overall questions the present study will address are: "Who are these teachers?," "How did they become practitioners who

differentiate instruction?," and "Why are they able to accomplish what others fail to do?" A review of the literature on teachers' growth and change is important before addressing these questions in further detail.

Some Reasons Teachers May Differentiate Instruction: Understanding Teachers' Professional Growth

Both instruction and the change process are personal matters. To understand why teachers may differentiate, it is important to understand teaching and change as personal experiences in a teacher's cycle of development. A brief review of the research on stages of teachers' growth and teacher cognition will provide some background on factors that may impact upon a teacher's need and ability to differentiate instruction for the gifted.

In his research on expert teachers, Berliner (1988) outlines five stages that trace the development of teachers from novice to expert status. These stages are novice, advanced beginner, competent performer, proficient, and expert. Many teachers may not progress beyond the competent stage, a stage characterized by their ability to make conscious choices about what they are going to do and the ability to determine what is and is not important. The competent teacher is not fast, fluid, or flexible in behavior, and lacks the holistic sense of similarities that earmarks the proficient stage. The proficient teacher is intuitive in pattern recognition and in ways of knowing, yet still determines what to do through analytic and deliberative thoughts. Few teachers reach the expert stage, a stage characterized by fluid performance that is seemingly effortless. In Berliner's study, the experts focused on students' work, achievement,

progress, and cognitions. When viewing classrooms, they concentrated on student productivity. The expert teacher becomes one with the subject, and may experience difficulty in breaking an action down into its component parts to explain or teach to others.

The research on first-year teachers breaks down the novice and advanced beginner stages into patterns teachers establish to become successful. These patterns become the beginning of a teacher's repertoire to address control and management issues, formal discipline procedures, classroom routinization, identification of appropriate content and activities for students, student motivation, and effective planning and lesson pacing (Bullough, 1989). As teachers acquire these skills or build a schemata for the art of teaching, their conception of self changes (Bullough and Knowles, 1991).

Some researchers have documented how teachers define themselves as they experience professional growth and change through the study of metaphors. Lakoff and Johnston (in Bullough and Knowles, 1991, p. 232) note that "The process of self-understanding is the continual development of new life stories for yourself." Blumer (in Bullough and Knowles, p. 232) adds that "...through seeking to identify changes in metaphors, shifts in self-understanding can be identified, which is essential to understanding teacher professional development as an interactive process of self-formation in context." Metaphors that evolved during this first year included "teaching as an extension of parenting" and "teaching as nurturing." Bullough and Knowles analyzed journals, curriculum logs, periodic classroom observations, and a series of

interviews to understand and improve practice and to provide data to help researchers understand teacher thinking and development during the first year.

An outgrowth of metaphorical thinking is the use of reflection. Schon (1983) led the development of this method of inquiry because his experience led him to believe that competent practitioners usually know more than they can say. Their understandings are context-specific, a kind of knowing-in-action, most of which is tacit. Reflective learning describes a skilled questioning sequence used to extract from another individual the thoughts and processes that underlie a decision-making opportunity. It is one tool that has been used to capture teacher cognition.

Teacher cognition is defined as, "...pre- or inservice teachers' self-reflections, beliefs, and knowledge about teaching, students, and content; and awareness of problem-solving strategies endemic to classroom teaching" (Kagan, 1990). Teacher cognition includes teachers' interactive thoughts during instruction; thoughts during lesson planning; implicit beliefs about students, classrooms and learning; reflections about their own teaching performance; automatized routines and activities that form their instructional repertoire; and self-awareness of procedures used to solve classroom problems. Other tools have been used to measure teacher cognition; however, only the multimethod evaluations of teachers' knowledge shows consistently that teachers' pedagogical beliefs are closely related to their actual classroom performance (Kagan, 1990).

Research on stages of teacher development and teacher cognition indicates that a teacher's ability to differentiate, and rationale for differentiating instruction, is

personal and tied to the essence of who she is as a teacher (Bullough and Knowles, 1991). By using multimethod evaluations to determine a teacher's pedagogical orientation toward giftedness, and triangulating this data, it may be possible to probe further the linkages that cause teachers of the gifted to differentiate instruction. As evidenced in the literature, the knowledge to differentiate may come from a class or a book, but the knowledge of how to differentiate emerges over time and will be different for each individual.

The job of educating gifted learners in the regular classroom is a formidable undertaking. In addition to possessing the will and skill to adapt instruction to meet the needs of gifted students and other diverse learners, teachers may at times need to navigate through a web of varying political agendas to do so. What personal traits or external factors strengthen or inhibit a teacher's ability to differentiate for this population? What beliefs and skills must teachers' possess to be successful in differentiating instruction? Are they always successful in all content areas, for all gifted students? Do they individualize instruction for all learners? Before tackling this question, the focus of this study, it is necessary to define the methodology to be used. This forms the basis for the next chapter.

CHAPTER 3

Method

Qualitative Case Study Design

The purpose of this study is to conduct preliminary research that will help researchers and practitioners in the field of gifted education understand what happens when two notable regular classroom teachers instruct gifted learners in their rooms. The study is qualitative in method, using narrative reflection to develop two case studies. [The chosen research method is qualitative inquiry because it contributes to basic research by using inductive strategies that help generate and confirm theory which emerges from close involvement and direct contact with the empirical world of the teacher and classroom (Patton, 1990). Qualitative study avoids imposing predetermined constraints on outcomes, and the study unfolds in a natural progression with minimum manipulation by the researcher (Lincoln and Guba, 1985).]

A case study approach is the most appropriate qualitative method because the researcher is interested in insights, discovery, and interpretation rather than hypothesis testing. Patton (1990) identifies further reasons for using a case study approach. He states that case studies are particularly important when the researcher is puzzled by particular cases, such as an unusual successes or failures. Detailed case studies of these unusual cases help to generate particularly useful information through their portrayal of depth, detail, and individual meaning.

Yin (1989) defines a case study as an empirical inquiry that, "...investigates a contemporary phenomenon within its real-life context when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used (p. 23). Merriam (1988) describes the case study as an approach which "...aims to uncover the interaction of significant factors characteristic of the phenomenon" (p. 10). The case study seeks holistic description and explanation because it is impossible to separate the phenomena's variables from its context. Embedded in the use of a qualitative case study approach is the use of narrative methods of inquiry which invite teacher reflection.

Narrative Method

Narrative inquiry deals with the personal histories of participants embedded within the social history of schools and schooling (Connelly and Clandinin, 1987) and was employed as a tool for constructing these case studies. A central construct within narrative method is narrative unity. Connelly and Clandinin (1987) define this unity as,

...the union in a particular person in a particular place and time of all that the person has been and undergone in the past and in the past of the tradition which helped to shape the person...[it] is not merely a description of a person's history but is a meaning-giving account, an interpretation, of one's history and as such provides a way of understanding the experiential knowledge of classroom participants (p. 131).

The use of narrative inquiry allows the researcher to probe the underlying principles, beliefs, experiences, and knowledge of the participants, and is necessary due to the lack of information regarding teachers who differentiate for the gifted. Narrative

methods are characterized by a focus on teachers' practical knowledge as a basis for theory, an expanded view of research to include an interpretive reconstruction of the practitioner's life as it bears on present work, and a collaborative relationship between the researcher and practitioner. Assumptions of narrative method follow descriptions of each of these areas.

Focus on teachers' practical knowledge

Narrative inquiry looks at the practical knowledge of teachers in their classrooms and is a shift from:

An analysis of practice in terms of theory to the development of theory in terms of practice...it is a shift from the interpretive process from a researcher's interpretation of observed data to a mutual researcher-participant reconstruction of meaning in action (Connelly and Clandinin, 1986, p. 295).

The ultimate purpose of narrative method is to develop an understanding of the teaching process more generally and to develop a language of classrooms tied to the emotional, moral, and aesthetic character of classroom life (Connelly and Clandinin, 1987). The daily working question that guides the researcher is, "What is the meaning of specific classroom actions for teachers and students?" The researcher, in collaboration with the teacher, works to frame an understanding of how the classroom participants know and come to know their situation.

Clandinin (1985) stresses that a focus on teachers' practical knowledge is a strength of narrative method because it helps to understand the change process on a personal and meaningful level. He states that the limited success of curriculum implementation in the past is due to a failure to understand the teacher as an active holder and user of personal practical knowledge. Personal practical knowledge is

defined as, "...knowledge which is imbued with all the experience that make up a person's being. Its meaning is derived from, and understood in terms of, a person's experiential history, both personal and professional" (Clandinin, 1985). By recognizing and conceptualizing teachers' personal practical knowledge, researchers work to enhance and secure teachers' professional status while gaining a greater understanding of curriculum implementation.

Expanded view of research

The process of grounding research in teacher's personal practical knowledge dictates that the researcher will work to inductively uncover prior experiences that led to the techniques that are now demonstrated or practiced in the classroom. Connelly and Clandinin (1987) state that,

Through the construction of personal philosophies, images, and narrative unities, narrative method offers an interpretive reconstruction of parts of a person's life. It is a study which is historical, personal, factual, and causal in an interpretive sense and designed to reveal what is meaningful in a person's history for purposes of understanding classroom actions (p. 134).

Narrative method brings to the surface circumstances which help shape current practice. It does not seek to describe a person's history, but strives to portray a meaning-giving account to understand the experiential knowledge of the teacher.

Collaborative relationship

The study of narrative uses reflection to study the ways humans experience the world. The use of narrative in educational research is based on the precept that humans are storytelling organisms who individually and collectively lead storied lives. Both teachers and learners are storytellers and characters in their own and others'

stories. Connelly and Clandinin (1990) assert that, "When both researchers and practitioners tell stories of the research relationship, they have the possibility of being stories of empowerment" (p. 4). Barone (1992) describes the need for greater narratives of professionalism to enhance the field of education in the public eye, while Lieberman (1992) further advocates greater collaborative relationships between researchers and practitioners to better understand and describe the improvement of practice, something strongly needed in gifted education.

The study of narrative also emphasizes understanding curriculum through participant observation in classrooms and post-teaching reflection through interviews with participants designed to probe more fully the meaning of specific teaching acts. Rather than asking a teacher her point of view on teaching style, objectives, and philosophy, the researcher asked why certain activities such as notetaking, cooperative learning, independent study, etc. were acted out in the way they were by the teacher. This reflection-in-action and reflection-on-action created the basis for two narrative accounts which constitute detailed methodology for the development of theory in narrative method (Connelly and Clandinin, 1986).

The collaborative relationship between researcher and practitioner and the possibilities for teacher empowerment were brought to fruition during the final stage of research, theory building. At this stage, the researcher presented a first draft of ideas to the teacher (Connelly and Clandinin, 1986). These ideas stemmed from the observed reflection-in-action and subsequent interviews based on reflection-on-action. Theory development was dialectic. The researcher and participant mutually develop

ideas as they discussed and modified the participants narratives. This written dialogue that joined reflection-in-action and reflection-on-action resulted in the development of a more or less coherent narrative that contained what Connelly and Clandinen term a teacher's "personal philosophy." Personal philosophy refers to a teacher's perception of self in teaching situations. It is based on an experiential understanding of teacher thinking.

The collaborative and interactive nature of narrative method may change both the researcher and practitioner during the course of the research. These changes may modify a teacher's view of theory and how it relates to practice as the boundaries between research and practice become blurred. The effects of this process from a research standpoint are documented and shared in Chapter 5.

Summary of principles of narrative method

Eight principles underlie the narrative method of research. These principles are undergirded by basic qualitative, naturalistic methods and echo the beliefs and assumptions espoused by the constructivist paradigm and fourth generation evaluation models (Silky and Readling, 1992). Clandinen and Connelly (1988) list the principles as follows:

1. Negotiation of entry and exit is a collaborative process;
2. Reconstructing meaning is emphasized rather than the judgment of practice;
3. Participant is viewed as knower rather than observed being;
4. Participants are collaborative researchers;

5. Openness of purpose is essential between both the researcher and participant;
6. Openness of judgment and interpretation exists between researcher and participant;
7. Multiple interpretations of text exist and appropriate assumptions and interpretive logic guide the course of the interpretations made. It is essential to demonstrate the link between the interpretation and the phenomenon.
8. Ethical quality of the co-participant relationship is paramount.

These principles were shared with and adhered to by the participants and the researcher in this study. The methodological log documents this process.

Research Questions

Current trends in organizing for instruction indicate that gifted students are likely to be served in regular, heterogeneously grouped classrooms by regular classroom teachers for all or part of the school day. In order for the potential of these students to be challenged, teachers need to be able to provide differentiated instruction to address group and individual needs. The intent of this study was to learn what traits and/or experiences selected teachers had that allowed them to differentiate instruction for gifted learners. Basic questions that guided the study include:

1. What is the knowledge relating to giftedness and teaching that the teacher possesses and uses in the classroom?

2. What motivates the teacher to differentiate instruction for gifted students in a heterogeneously grouped classroom?
3. What factors inhibit or enhance the teacher's ability to differentiate instruction? /

The inductive nature of qualitative case method further assumed that other questions would evolve and be addressed as the study progressed (Mishler, 1986).

Definition of Terms

The term "gifted student" has been defined in many ways. This study will adopt a definition of giftedness based upon that of the Virginia Board of Education's Proposed Amendments in the Regulations Governing Educational Services for Gifted Students, 1993) because these are used to guide the identification and programming options in the district in which this study took place.

"Gifted students" or "gifted learners" refers to those learners identified by their school, "...whose potential for accomplishment are so outstanding that they require special programs to meet their educational needs. These students will have been identified by professionally qualified persons through the use of multiple criteria as having potential or demonstrated abilities and who have evidence of high performance capabilities in the following areas: intellectual aptitude, specific academic aptitude, technical and practical arts aptitude, and visual or performing aptitude."

"Differentiated instruction" refers to the modification of content, process, product, learning environment, or affect to address the needs of gifted learners. Characteristics of differentiation appropriate to gifted learners include a conceptual approach to teaching that allows students to make abstractions and connections, provides for student choice in assignments, gives students opportunities for in-depth, independent work, and challenges students to develop creative solutions to real problems and present them to a real audience. (Please refer to Chapter 2 for further details on characteristics of differentiation for gifted learners.)

Method

The Unit of Analysis

The "bounded" group in this study are two teachers and their classrooms. These are regular elementary classroom teachers who are responsible for meeting the needs of cluster grouped identified gifted students within a heterogeneously grouped classroom. The teachers were selected through a three-tiered process.

Candidates were nominated through the recommendations of the supervisor of gifted programs, the resource teachers of the gifted that served the schools, and the building principals. These teachers were contacted with the understanding that they were being considered as possible candidates for a study of teachers of the gifted. Next, a formal two-hour observation using a protocol instrument for observing differentiated instruction within the classroom was made by the researcher to screen candidates. Four teachers demonstrated consistent, planned differentiation of instruction, as indicated by established classroom routines, and were eligible for consideration for the final phase of the nomination process.

A second observation of these teachers was done to determine if the teachers were individualizing instruction to meet specific interests and needs of gifted learners. Individualizing included use of the following strategies: learning centers, learning contracts, curriculum compacting, diagnostic/prescriptive approach, mastery learning, accelerated learning, IEP's, daily learning agreements, flexible grouping arrangements, and informal methods designed by the teacher. Two teachers consistently demonstrated planned differentiated instruction in their classroom routines to meet

group and individual needs. A follow-up interview was conducted with the final two candidates to triangulate data and gather information regarding the class' composition and daily routines and to confirm that these teachers were receptive to the collaborative nature of the study. These teachers accepted the opportunity to participate in the study.

Instrumentation

The following observation protocol instruments were developed from a review of the literature to help identify regular classroom teachers of the gifted who gave evidence of differentiating instruction to meet the needs of gifted learners. Because no literature exists as to the extent of differentiation that should occur in the regular classroom for gifted learners on a regular basis (Shore, 1991), the researcher made the assumption that these teachers developed instructional routines that demonstrated use of planned and appropriate differentiation of instruction. A second assumption made was that a trained observer could detect and record these characteristics of differentiation, as well as their duration and repetition, by using an appropriate observation instrument and other research strategies such as descriptive field notes.

Directions for using Observation Protocol Instrument I

The two pages of the Observation Protocol Instrument were used concurrently so that as the observer recorded notes on the lesson, she also could check off boxes in the matrix section that applied to the observation. The observer included as much detail as possible by recording specific examples that illustrated the principles of a differentiated curriculum in the appropriate box.

When observing a lesson that included teacher questioning, the types of questions used were noted by tallies on the right side of the page labeled, "Questions." Lower level questions were recorded under the heading, "Knowledge and Comprehension," while higher level questions were recorded under, "Application, Synthesis, Analysis, and Evaluation." Details about the objective, strategies, materials, procedure, and evaluation of a specific lesson were included in the appropriate space.

DIFFERENTIATION MATRIX						
	A	B	C	D	E	F
1 Content	broad based issues, themes, concepts accelerate & enrich concepts ethics & value sys. future oriented study of people	inter-disciplinary relationships include arts, world affairs, and global perspect.	accel. of content organiz. & economy student profiles	investigative and indepth research	integration of basic skills include microcompu. & career ed.	emphasize abstract & basic concepts in... discussions written wk. cl. quest. assign. homework lectures
2 Process	higher level thinking skills include critical & creative thinking	open-ended questions and tasks	research and reference skills	inductive thinking	meta-cognition and decision making	self-directed learning group interaction activities and simulations
3 Product	real problems	real audiences	self evaluation	transfor- mations		
4 Learning Environ.	student choice in assignment	complex rather than simple	student centered	encourage divergent thinking	responsive learning environment	flexible grouping
5 Affect.	develop emotional growth	encourages develop. of positive self concept	develop leadership skills	develop values and release potential	develop global identity	

Classroom Observation Protocol

TEACHER _____ UNIT OF STUDY _____

DATE _____ TIME _____

OBSERVER _____ Grade _____

Level of Questioning
Knowledge & Comprehension

- Notes:
- Objective:
 - Strategies:
 - Materials:
 - Procedure:

Application, Synthesis, Analysis, Evaluation

Evaluation:

Directions for Using Observation Protocol Instrument II

Identifying teachers of gifted learners who focused on culling the potential of individual students within group differentiated experiences through the consistent use of specific, appropriate strategies was the focus of the second stage of observation. A second observation instrument was designed to record some of the planned strategies recommended in the literature that were evident in these classrooms. Informal strategies were recorded through observations, and interviews were used immediately following the lesson to clarify and triangulate data.

Observation Protocol 2**Individualized Differentiation of Instruction****Evidence of individualized planning and instruction**

- 1) learning contracts
- 2) diagnostic/prescriptive approach
- 3) IEP's
- 4) daily learning agreements
- 5) curriculum compacting

Evidence of flexible grouping based on student needs/interests

- 1) learning centers
- 2) cooperative learning groups by abilities and/or interests
- 3) learning extensions beyond regular school program
(e.g., field trips, mentors, special guests)
- 4) enrichment of curriculum with non-academic topics
- 5) extension of student interest through independent study

Data Collection

Data collection in both case studies followed a spiraling approach that began broad and then funneled down toward refinement in the final shared narrative. Initial data collection used traditional qualitative methods and included observation, interviews, and document collection, followed by the negotiation of a shared narrative unity (Connelly and Clandinin, 1990). The reviewed documents included teacher lesson plans and unit plans; activity logs; examples of student assignments, contracts, and work; weekly charts and schedules; and examples of organizational and managerial methods that helped to ground the narrative in practice. Each study culminated in the development of a shared narrative grounded in specific teaching acts. The researcher and participants worked collaboratively on these narratives.

Observation was used to document the types of differentiation used with the class and identified gifted students. Interviews followed these observations and were grounded in observed data to help illuminate why the teacher chose particular strategies and activities, how the teacher perceived her role in specific teaching situations, and what past factors led to these beliefs.

During and after each interview, member checks (Lincoln & Guba, 1985) were done to ensure that what was recorded was accurate. At these meetings both parties agreed on the link between the interpretation and the phenomenon, and the areas that needed to be probed to portray the essence of the teacher and the craft as it existed in the classroom. As collaborative researchers, all parties assumed responsibility for the direction of the study.

Observations and interviews continued using naturalistic methods until the observer captured a sequence of events that could be interpreted as representative of the teacher's craft. At this point, interviews were based on the tenets of narrative inquiry to probe why the teacher acted as she did and how she arrived at this knowledge. The dialectic nature of

narrative inquiry came into play as researcher and participant collaborated to reconstruct what was essential about the teacher and her craft and the forces that influenced and nurtured its development. The researcher and participant worked toward agreement on the final narrative to conclude the research.

Fieldnotes were kept throughout the data collection process. These notes were descriptive and reflective, and included thoughts and observations before, during, and after interviews and observations. Descriptive fieldnotes used thick description to elaborate on the subjects, dialogue, physical setting, particular events, activities, and students' behavior during observations. Reflective notes were used to reflect on the analysis, method, ethical dilemmas and conflicts, the observer's frame of mind, and points of clarification (Bogdan and Bilkin, 1992, p. 106). Reflective notes also were used to document how the study affected the relationship between the researcher and participants, and to track changes that occurred between the teachers and their craft; and the researcher and the study.

Notes, transcripts, data analysis, and methodological logs were organized and maintained to allow for a peer debriefing during and after the research cycle with another doctoral student (Lincoln and Guba, 1985). An audit trail was maintained to allow for an audit upon the project's completion. This "chain of evidence" (Yin, in Buchanan and Feldhusen, 1991) is included in the data base of the report method, and data analysis was discussed with the advisor of the dissertation committee during the research cycle to further identify areas that would strengthen the generation of concepts and understandings. Examples of fieldnotes, transcripts, the coding guide, coded data, and the methodological log can be found in the appendix.

Data Analysis

Informal data analysis began as notes during the initial interview and observation sessions. More formal analysis was done immediately after observations and interviews as I

noted my immediate responses to what I observed and heard. Details of people, places, time, and events were recorded before leaving the site. Notes reflected the accommodation and assimilation of new knowledge with prior knowledge and thoughts, and enabled the researcher to notice linkages or discrepancies in the data. Questions and leads for further study were included in these notes.

A third level of data analysis occurred after transcribing the interviews and observations. Data were entered into The Ethnograph, a computer program used to facilitate the analysis of qualitative data. A first printing of each interview and observation included numbered lines and wide margins to allow for handwritten notes and commentary. Ideas for patterns and possible codes were noted on a theme basis for each document. After jotting notes on each interview or observation, a summary was made to chart the emergence of different themes as they related to the data.

As data accumulated, it became necessary to review previous codes and themes in a search for mutually exclusive categories for final analysis. Quotes, repetition of ideas, content, process and other curriculum language, philosophy on education, and other specific knowledge was printed out with each code. This allowed the researcher to determine the extent that each code was cited and the relationship or context the code was noted within; which over time elucidated a set of routines or sequences upon which the shared narrative would be based.

The narrative was based upon a sequence of teaching acts that gave an image to the emerging codes and themes. This sequence was analyzed in collaborative interview sessions and took into account the role of biography, experience, and personality factors that shaped its development. Data analysis on a given case was completed when both the researcher and participant agreed that the final narrative expressed the teacher's craft regarding differentiated

instruction for gifted learners and how she came to know it. Data that was previously collected is included in the narrative to ensure trustworthiness and triangulation of sources.

Researcher as Instrument

Experience and Training

I have worked for fifteen years in the public schools of Virginia; teaching first and second grades for five years, teaching the gifted in a resource capacity for six years, and spending four years in two different schools as an assistant principal. I hold a B.A. in English from Mary Washington College and a Master's degree in Elementary Education from the University of Virginia. In addition, I received inservice training and advanced coursework in gifted education. I served on the gifted advisory board in two counties, and conducted staff development in these counties in gifted education. I have presented at conferences at both the state and national level in gifted education.

My training in qualitative methodology began four years ago with research coursework at the University of Virginia, where I also passed the required doctoral qualitative research examination. I have collaborated with other graduate students on qualitative projects, and have read extensively in this area.

Predispositions

I am predisposed to the methods of naturalistic inquiry because of my belief that "context means everything." We write and teach about methods in classes and textbooks, but the actual practice of an art takes place in a context rich with challenges that excite or thwart invention. I believe that teachers and their craft are shaped by the interaction of their beliefs and external challenges. What differentiation occurs or does not occur will be examined in the light of context.

Biases

I have worked in the regular classroom and can identify with the challenges felt by teachers to meet the ever-widening student diversity in the public schools. At the same time, in my role as an administrator I have met with parents of gifted students who believed their children were not being challenged in the regular classroom. The frustration of these parents, combined with the sensitive responsibility this has place on me, is a driving force behind this study. My commitment is to understand more fully the factors that influence a teacher's ability to differentiate in an effort to help educators deal effectively with these issues.

CHAPTER 4

The Case Studies

These studies examined two regular classroom teachers who differentiated instruction for gifted students. Through observations, interviews, and document analysis, the studies seek to understand not only how the teachers view differentiation but why they teach the way they do, and what experiences and biographical factors led them to this level of expertise. Each case study will have three sections: 1) "Titus" or "Celia's" Day; (a typical day in the classroom under study); 2) Differentiation of Instruction, an examination of how differentiation is occurring for the class as a whole and for individual gifted students; and 3) The Narrative, an explanation of why this differentiation is occurring and how it got there.

Site 1

Patton (1990, pp. 374) states, "The first task in qualitative analysis is description. The descriptive analysis answers basic questions." We move then, to spend a day in a second grade, heterogeneously grouped classroom with Titus and her twenty-seven students.

Background Information

Titus is a jovial, middle-aged teacher who dresses in bright colors, organizes things in piles, and laughs a lot. She is a talker, but a thoughtful one. While she talks, she is trying ideas out, dabbling with new territory, and organizing a way to present her thoughts logically. During this study she often left one of our discussions with thoughts still unspoken. At these times, she would return home, record her thoughts on tape, and send them to me through inter-office mail. While the immediate

result of this was a lot of transcription for me, it strengthened our collaborative relationship.

During one of these sessions, Titus provided some professional information about herself.

I have a master's degree in education from George Mason University in Elementary Curriculum and Instruction. Received it in 1991. In 1991 I was also named Stafford County's Teacher of the Year, which was probably the greatest honor of my life. I also received another award a year ago this April. I received an award through Mary Washington College's Education Dept. for Outstanding Excellence. They, for the first time, honored three regional teachers for their contributions to education, and I was fortunate to be one of the three. I currently have two books in publication. One is called, Linking Math with Literature. That came out in March of '92. In July of '92, Selected Literature for Language Skills was published. Currently I am in the process of writing a third book which is a sequel to the math book, a volume II, that one is selling very well nationally. So I have an August 1st deadline for that one.

I do a lot of staff development training for this county. In addition, I have done staff development work for Charles County, City of Dunnigan Schools, Carlos County Schools. I've done workshops in Prince Edward as well as in David County. I've presented, made presentations at...twice at the Virginia State Reading Association, their state conference, once at the state conference of National Teachers of Math, and just this year was fortunate to present at a National Conference, which was the National Council of Teachers of English.

I got interested in the kind of teaching that I do...when I was in graduate school I was exposed to the philosophy of whole language. It fit exactly the goals that I was trying to accomplish in my classroom, so I came back and said to Bonnie, who was then the director of language arts for the county, that I was interested in doing this. She was excited, because she knew much about it and was waiting for a teacher to come forward. As a result, Bonnie guided me, observed in my classroom, continues to send literature to me through the school mail system, and has been a great support. She's the one that encouraged me to get involved with staff development and start making presentations to teachers.

This past week-end I taught a class at the college along with Cathy (current reading supervisor for the county). The two of us together taught a course for teachers who were recertifying. So I'm pretty busy outside of the classroom as well as in (lintrv4, L. 91-169).

Titus does stay busy, for in addition to her professional responsibilities she is married and has two children. She has a sixteen year old son who is a junior in high school and a thirteen year old daughter entering the eighth grade.

The school at which Titus teaches, Fordham Elementary, was built about 25 years ago. Housing approximately 650 students, it has seen radical changes in its demographics over the last four years. Roughly 40 percent of the student body is now eligible for free or reduced lunch, and with continued growth in nearby low-income townhomes, this figure may continue to rise.

Second grade is crowded. Five teachers each have approximately 27-28 students in their heterogeneously grouped classrooms. The diversity in Titus' class is no exception, and she currently has one child who receives resource help three times a week for an emotional disturbance, one mainstreamed learning disabled student, two students currently being tested for potential learning disabilities, and one child from a self-contained emotionally disturbed class who is mainstreamed in her room for two hours of content instruction daily.

Within this self-contained classroom are two students identified as "talent pool," meaning they are potentially gifted students not yet identified. Titus describes these two students, Jonathan and Dwight, as follows:

You asked me to elaborate a little bit about Jonathan. And I'll talk to you a little bit about Dwight. These are the two boys that I have referred for the gifted and talented program. They are both going to be a little bit difficult, I think, to get into the program under the county's guidelines. And I think after you hear the profiles of each child you'll know why. And yet, Caroline, the focus teacher for Fordham, and I are both in agreement that they need to be there.

Jonathan we have no test scores on. He's new, he just came from N.C. this year, so we're going on instinct or classroom observation. Jonathan hates to write, so I have no written products for Jonathan. Jonathan is not a cooperative student in cooperative groups. He is almost anti-social; he has great difficulty getting along with his peers. He does not

like to work with other children. If Jonathan had his way, he would sit with his nose in a book all day and do nothing but read. Yet, on the other hand, Jonathan has fantastic background knowledge. I did an informal spelling assessment of my class and Jonathan spelled all of the words all of the way through the 6th grade level. But yet, to be able to have a product, which is what the county is looking for in a portfolio on Jonathan, I'm having trouble putting it together. I am getting a lot of anecdotal records. But he's a complex child. There are some emotional concerns. Jonathan is from a split home. His father lives in Michigan. He lives with his mother and step-father, who is a Marine. He is the oldest of 5 boys. The guidance teacher has been very much involved with Jonathan. We've had him in special groups, and she's worked one on one with him. But Jonathan's problems, I believe, are coming from the fact that he is being lumped together with all of the 5 children in the family. And the 5 boys have bath time together, they have bed time together, it's always, "the boys." And Jonathan is rebelling, I think, against that, as the oldest, and does not enjoy being treated as the younger. He is not involved in social situations outside of school, and does not have children to play with his age. He only has his brothers. The guidance counselor and I have talked with his mother and step-father extensively about the fact that could they maybe put Jonathan to bed 15 minutes later than the other kids, just to show him that he is growing older and respect the fact that he is older. And the parents say, well, that's a problem, because that's their together time. I said that perhaps on Saturday you could take Jonathan to a movie, and tell the other kids the reason they can't go is because Jonathan is older, and when they get to be 7, they can go. But none of that seems to be going on. We've encouraged Cub Scouts, we've encouraged soccer programs; things to get him with other kids. But Jonathan is an extremely frustrated little boy. And I think that's a lot of why there's a lot of frustration and rebellion toward traditional. He very much feels out of control of his life. Choices are extremely important with Jonathan. If I tell Jonathan what to do, I can guarantee you I will get nothing. But if I offer Jonathan a choice, I may have a 50% chance of getting something from him. But yet at the same time, Caroline and I both see this as a very gifted child; a troubled, gifted child.

Dwight, on the other hand, is a very good student. But Dwight is not a risk-taker. So I don't have outstanding products from Dwight either. I have very accurate products, but I don't have the creativity from Dwight. Not because it's not there, but because he's afraid to let it come out. Dwight is from an un-enriched home, I guess you would say. Mother and father both work. There is one other sibling in the home. The week-ends are spent at the auto races. The family knows Dwight is bright and they buy him a lot of books, but beyond books they don't know what else to do for Dwight. I have tried to talk to them about providing Dwight with new experiences, such as taking him to a foreign restaurant, taking him to a museum, just doing different things and providing new experiences for Dwight to give him a broader

background. Dwight is very bright. We do have CogAT's on Dwight, because he was in our school system last year. And his CogAT's are like 95% in all three categories. So we feel Dwight is very bright. Another thing I have on Dwight is a lot of anecdotal records. I was teaching renaming and regrouping to groups of kids this year as they became ready for it, and Dwight of course was in the very first group. I did a demonstration of how to do this with manipulatives, and showed the kids how to record what I was doing with manipulatives on paper. After one example, I put another example before the group, and we were going to work the second example together. I looked at Dwight's paper and he had the answer down already. I said, "Dwight, has someone taught you how to do this at home?" and he said, "No, you just taught me!" So, Dwight is very quick, but as far as coming up with some great creative product, I don't have that, which is what our system is looking for at the moment. So they're going to be a little tougher to justify, I think, given the district's identifying process. But those are the two I see. I also have some other kids that I'd like to keep in the talent pool for next year. Caroline, for instance, is an outstanding reader. She's showing evidence of talent there. Zack, Zack is nine years old and is going through screening with child study because Zack still cannot read; however, Zack is one of my best math students in the class. It is phenomenal how quickly he can pick things up and reason through them in math. So I'm hoping the Child Study testing will reveal to what extent math is a talent for Zack. So, there are some other kids that we're watching (lintrv4, L. 983-1140).

From these student descriptions, one begins to sense Titus' emotional involvement with her students. Emotions, in fact, play a major role in her decision making, and are rooted firmly in her personal philosophy which in turn is reflected in her curriculum, pedagogical, and professional decisions. My study begins with a "typical" day in Titus' second grade classroom, organized as a result of eight visits to her classroom.

Titus' Day

"Our similarities make us equal, our differences make us unique."

It is 8:40 a.m. Titus and I are standing in the hallway under this sign that hangs above her classroom door. Students are in a line, patiently waiting for their second grade teacher who had stopped at the office after the morning faculty meeting to make a phone call. She greets them all, then chats with a Brownie, a former student from last year, who is selling cookies. "I've already ordered from my students this year! I figure I need to give them a chance, since I ordered from you last year!" This little girl's poem about Titus still hangs by the classroom door in the hallway.

At 9:00 the class was involved in puzzles and lego type activities as they waited for students to return from breakfast. Students chose their activities and worked quietly. At 9:08, students returned to their desks. Titus began taking attendance, asking students if those missing had been spotted at breakfast or on the bus. She involved students in figuring out how many were present. "We have 27 students, and 3 are absent! How many are here today?" Several students responded, then the class counted backward together with Titus. They did this twice.

Titus moved toward the north end of the classroom where a calendar and weather center had been set up. Students remained seated at their desks, which were fashioned in two groups of 6 desks each, 17 desks in a double row, face to face lengthwise at the back of the room. Another cluster of 4 desks could be found in the south corner near the door.

Titus went through several fluid routines that directly involved many students while also integrating second grade math skills with the calendar.

What pattern are we putting up on the calendar today? While Roy is doing that, I want someone to tell me how many days we have been in school so far this year? Jessica? 79. Thank-you, you may add that to the tape. O.K., Misty, will you take this to the office? While she's doing that, we need someone to take care of the weather chart. Straws, will someone take care of the straws? and the cubes, will someone take care of that? and the tally, need someone to do that...and the date on the chalkboard...need someone to do that for us (Observ, L. 1-59).

I noticed that management and instruction flowed as one in this opening routine. All students watched each other carefully and Titus kept a brisk pace going that redirected students' attention to their peers who were working on various housekeeping tasks.

While Ann is doing spelling (of date on board), I want you to look at the straw box with me. Something special is going to happen to the straw box tomorrow. What is it? Yes, another 10 bundle will be made. Let me tell you something Ann. You have a letter in your word that you do not need. See if you can find that letter. Ann fixed the spelling of January and sat down (1observ2, L 66-76).

Titus continued with the calendar activity. She stressed math facts by asking Jon to determine how many days students had been in school this month. Jon was asked to explain his problem-solving plan to Titus and the class. Jon did, and Titus asked students if he had a good plan. The class said no and explained why. (Jon had counted a Saturday.) Titus then had students explore all the ways they could use the calendar to figure out how many days they had been in school.

Counting forward, counting backward, those are the two best ways. Students also subtracted days students were out of school. Please check Ann's date and tell me what you think? Did she do a good job? Class responded "yes." Titus talked about the use of commas with the date (Observ, L. 78-95).

Titus acknowledged that the class was very subdued today! She led them in some jumping jacks before calling them to the Sharing Circle.

At the Sharing Circle, several students were called upon to share books by reading them aloud to the class. Titus later explained the significance of the Sharing Circle to me (T=Titus; P=Pat).

- T Yes. They each have a day assigned.
 P Oh...and what can they share at that time?
 T At this time, usually it's some kind of an assignment. Originally, the first one that we did, we talked, um, something went home to parents that speaking before a group was important. Presenting something. And the first one was on presenting yourself. Bringing in your favorite toy, or a picture of your family; something of your choice. And then the next one was, you shared a hobby. Next time we'll be bringing in something that the class will estimate. And this time they are supposed to bring in a poem that they read and that they've practiced. And just something for one or two minutes (lintrv1, L. 630-662).

Sometimes, students request to share something with the class, and Titus assigns them a day when their topic will relate to other classroom studies. Classroom studies are frequently brought to the forefront at the Sharing Circle, and include lessons on structural analysis and stories relating to themes being studied. At other times, the Sharing Circle becomes a forum for Titus to share her knowledge about a certain topic (lintrv1, L. 730-732).

On this particular day, Titus used the Sharing Circle to review facts about artists the class was studying. Behind her, hanging on the chalkboard was a 6 by 8 foot grid done on bulletin board paper to chart each artist and important facts about him/her. The chart looked liked this:

	Boticelli	DaVinci	Rembrandt	Monet	Canatt	Picasso	Klee
Full Name							
Hometown							
Dates							
Why famous							
Most famous work							
How art was learned							
"Neat" Facts							

Students were encouraged to refer to the chart to find answers to Titus' review questions (Matrix, 1/13/93).

I am thinking of a painter whose real name most people don't know. We know him by his nickname. Boticelli . What does Boticelli mean in his real language, Italian? Fat belly! Does someone want to tell me the story about his name? I am thinking of a painter who got in trouble because people paid him to paint their portrait, and he did not paint them all as important. Rembrandt, right! Students wanted to hear her story again. They asked Titus to sit in the chair and tell the story again. That's a good story! She did! She included students as props to illustrate the story. She tells about Rembrandt's wife, her death, and where his favorite place to work was. She also mentioned his remarriage.

Back to the chart. I am thinking of a painter who thought painting was boring. Wanted to do something else. Sculpting. I am thinking of two artists who didn't get along with each other. They were jealous (DaVinci & Michelangelo)! Continued with other facts about artists (Observ, L. 105-134).

Spelling usually takes place after the Sharing Circle, before students begin work on their reading contracts and other activities. Titus explains.

- T ...we usually do some kind of a spelling practice every morning. You know, just briefly. Today they had to get their words in their spelling dictionary, which you saw when they came in.
- P And so these are the words that they have on their lists (taped onto their desks). They are individualized.
- T Yeah, taped on their desks! And lists also went home to study (intrv1, L. 684-699).

Back at the Sharing Circle, students continued to review stories to go with the artist facts. Soon Linda arrived. She is a school board member who volunteers on Wednesdays. A few minutes later, another parent arrived. At this point, Titus explained the procedure for the next forty-five minutes. This would take them to 10:30, when students would again convene to share.

Different groups will be assigned to read aloud with an adult. The rest of you have a choice of working on your contract items or working on your bulletin board. How many groups are there? ?? Any questions? Students dismissed by groups. Got their materials and began working. Groups were formed earlier by students choosing the painter they wanted to learn more about (Observ, L. 142-151).

As students worked on their contracts (Appendix A, "Getting to Know the World's Greatest Artists"), I took note of the room itself. The use of whole language and thematic units could be seen by the abundance of books, charts, pictures, and labels throughout the room. Books about art and artists lined the counter under the bulletin board on the outside wall. Near the front of the room and the Sharing Circle was a chart stand with poems on hangers. Other bulletin board information included characteristics of good readers and good writers, and the job of a good reader and author. Near the front of a room was a chart of Personal Reactions used to help students give a personal reaction in their journal to a story they just heard or read.

Phrases on this chart included,

I began to feel...
 I wonder why...
 I was surprised...
 I really can't understand...
 If I had been...
 What if...
 My favorite part...
 I learned...
 It reminds me of...
 I think the author...

Near this hung another chart listing Fairy Tale Motifs, further emphasizing the importance of stories in this classroom:

- a. a small person's journey from home to isolation from home.
- b. a small person's or hero's journey from home to stop a confrontation with a monster.
- c. a helpless person's rescue from a harsh home and the miraculous creation of a safe home.
- d. a conflict between a wise beast and a foolish beast (Observ, L. 169-202).

By this time, students could be observed working on "bulletin boards" on their respective artists. They were working in groups of three to four. "Bulletin boards" were being composed on brightly colored chart paper and depicted important concepts about their artist. Students chose books of varying difficulty on their artist to use as a resource. Other students read in groups or individually to parent volunteers, and Titus moved among groups. Sometimes she sought students out and probed them with questions to help them get started on their projects or to expand upon an idea, while at the same time other students came to her to share their work and seek advice.

At 10:30, the whole group reconvened at the Sharing Circle. This time the focus of the Sharing Circle was, "...to share a piece of literature and lead the children to certain understandings that I'm hoping they'll acquire (1intrv4, L. 359-364)." Titus further explained that she would be reading to the students, and this was,

...to see me read, as a model. It's a chance for me to model reading, and the whole class can see me, but that little group (the Monet group) can actually hear those words another time (lintrv1, L. 747-755).

Before beginning the Monet story, Titus had students learn "Stopping by Woods on a Snowy Evening" to give them an opportunity to talk about the recent snow and to extend this event with poetry. She uses poetry as the basis for word and structural analysis lessons as part of language arts instruction.

We first learn to read the poem for fluency or comprehension, and then we can go back in there and look for poems that have maybe suffixes. Words that have suffixes. And make a list of the suffix words that we find. And then what other suffix words can we find in other poetry. So I use a lot of poetry to teach word and structural analysis (lintrv1, L. 925-934).

Then she introduced the next artist on the chart, Monet. Students sat on the floor and listened as their teacher shared a few facts from the book followed by some of her own observations of the artist that the children might relate to before reading the story. "He was stubborn...very stubborn." Then she read the book to them. As she read, she highlighted certain words, like "impressionism." Here, she went on to explain that impressionism was, "...like a dream, kind of blurry." Often she asked students questions about what she just read to check their comprehension, and at one point she acted out how Monet would set up five or six easels to capture the same scene during different times of the day. After the story was finished, facts about Monet were plugged into the chart hanging on the chalkboard. Students who were "experts" on Monet were given the greatest responsibility for filling in this chart, for they had been reading this and other books on the artist to complete their "bulletin board" and reading contract. After completing the section on Monet, students were given a choice of follow up assignments to extend learning through the writing process. Their choices for this extension of Sharing Time were to choose one of the following:

1. Get out their learning log and write everything they know about Monet. Include a picture.
2. Write a five sentence poem about any Monet painting (paintings available in room).
3. Write a description of a Monet painting.
4. Write an acrostic poem and description of Monet (Matrix, 1/13/93).

As students worked, Titus floated around the room to help them get started. They shared their logs with her as they finished, and she commented. "Give me two more sentences." "Good, what else can you remember about him?" Jessica said, "I was going to do a picture here if I left enough space." Titus responds, "I think you're ready for it." To another student she says, "This is excellent! I would like some periods. Where could you put periods?" The student explains, and with a nod of his teacher's approval, returns to his seat to complete the punctuation exercise. Titus explains the class' overall level of achievement, and how she stimulates their growth:

...some of that has to do with this class and the placement we are at. These kids came in not being able to even write a sentence. Our first grade teachers are not writers. So where a lot of the second grade classes might be ready for the writing process, my kids are not...They are still struggling to get fluency going, and so there's not...I backed off, and really emphasize a lot of fluency. Try to give me one or two more thoughts...we're still at that point (1intrv1, L. 196-212)!

Glancing at the clock, Titus notes that it is 11:30. Time to clean up, wash up, and go to lunch.

After lunch, students have an independent reading time, called WEB time, for 20 minutes. The purpose of WEB time is to give students, "...time every day to choose books and read for pleasure, and not have to worry about anything but the pleasure (1intrv4, L. 14-16). During this time students settle anywhere in the room and read a book of their choice. The guidelines for this choice are that,

...they are required to read it and to understand it, and to be able to read a page back to an adult. Since understanding and reading a page back to an adult are tied to it, the children tend to choose books that are on

their reading level. So, that becomes an individualized assignment, and mastery of it is expected" (lntv4, L. 644-653).

Titus pays close attention to what students read, carefully steering them toward more difficult content and vocabulary. One child, Dwight, is a talent pool student, a child currently monitored for possible placement in the gifted program. Titus discusses his independent reading, and then expands on the progress of Caroline, another talent pool child.

We've got him [Dwight] reading chapter books independently, and some other things. Mysteries, he's into mysteries right now. And so I'm shoving chapter book mysteries right now at Dwight, independently. Caroline is a very good reader. She, also, is working with chapter books. Now it's been very hard to get those two to go after chapter books because neither one of them had the emotional stamina to hang in there for the whole thing (lntv1, L. 500-512).

Following independent reading is work in a content area. Titus explains,

I had planned on doing some map reading. We're supposed to teach a European country. Well, this is a perfect unit to work in a European map with. So we're just finding countries on the map and finding whether they're north or south of this one, or east or west. Making a key as to who lived where, that kind of thing, so we're working with that (lntv1, L. 786-795).

After a lesson in the content area, students participate in "readaloud" time.

Reading is once again modeled to students by their teacher, and the selection usually relates to the theme being studied. Students then leave the room for music, art, library, or physical education, depending on the day.

Upon returning to the room, students have an hour of math before leaving for home at 3:30. Math begins with a whole group problem solving activity to review or introduce material, followed by small group or independent work on basic skills at students' appropriate levels. Skills emphasized include graphing, estimating, telling time, measurement, and addition and subtraction facts. Titus uses a developmental model of teaching math which focuses on utilizing the Math Their Way program

endorsed by the county. Student choice, open-ended assignments, informal evaluation by the teacher, and management tactics that allow students to progress at their own rate continue to be emphasized in her math routine. The following notes (10b2) depict a typical math routine.






Objective for lesson was estimation followed by problem solving. Titus explained that some students would work at number stations while the other half of class would work on a new trading game with her. The rules were that those at the number stations, "Must stay all day!" and the same applied to those involved in the trading game. Tomorrow, the groups would switch.

"I have something 'tricky' up my sleeve today!" she stated to the whole class while they sat at their desks and listened. Students were given a blank sheet of paper. Titus walked around the room with a jar of beans that were colored pink on one side and white on the other side. Some students spoke aloud as to how many they thought were in the jar. Others were very quiet. After sharing the jar with all of the students, Titus took a seat in front of the room. She called clusters of students to her by their seating arrangements to check their estimates of how many beans were in the jar. After having their slips of papers checked, students lined up on either the "too high" or "too low" side. Others watched from their seats. Students were very quiet as they waited in line. They were told that they could not change their numbers. "Entire class is too low!" Titus called out. "Instead of telling you how many, let's use the cups." Titus sat down on the floor as the students stood around her. They helped her count the beans into cups by groups of 10. Titus explained her own bewilderment of how she told Mrs. B. (a paraprofessional) how many to put in, and when Mrs. B. showed her the jar, she was amazed at how few there were! Students then began counting the remaining beans by 2's.

After the whole group estimation lesson, students were split into two groups: the first group would practice math facts at the number stations with manipulatives, while the second group worked on place value with Titus, again using manipulatives. Provisions were made for both groups to move at their own rate, and a high level of student independence was observed. I return to notes taken during the observation.

Directions were given for the number stations. Students were expected to make "jewels" from the tubs to make necklaces. Students were to make number combinations with their chosen manipulative. Students each have a number card based on individual needs for number

concepts. The card tells the child a range to work on and the child makes choices within that range. For example, a card with 7, 8, and 9 means the child is working on sums for these numbers. Children fill in a grid each time they practice sums for each of their designated numbers. Each of three numbers is to be practiced three times. The grid looked like this:

7	8	9
		
		
		

Students were to record the number sentence for adding the colored jewels.

Ex: 2 red + 2 blue = 4 beads

2 red + 2 yellow + 3 green = 7 beads

Students were told to pick a number in correspondence to a blank number on their "score" sheets. They were to stay with this number the whole time, making facts that added to this sum (sums to 7, 8, 9 were most common in room). Titus asked them several questions: "What if I'm bored--Can I change my number?" "No!" "Once I get started, can I move to another station if there's room?" "Yes!" Students could change manipulatives but not the number they've chosen for the day. Students were then given their number station cards.

In an interview following the observation, Titus explains that number station cards are issued to students after an assessment to determine their level of math instruction in basic facts. Titus explains her assessment process for this:

Now what I've done is I've tested every child in the class several times. I did it at the beginning of the year, and then I always do it when their card gets filled again. And at the beginning of the year, what I did was I throw out four objects on the table. How many are here? They had to be able to tell me without counting and without touching each object. It had to be visually grouping them and saying "4." Then I'd quickly hide some under my hand and I'd say how many are under my hand. And they would have to look at the table and tell me here. And if there was one on the table they could quickly say "3." I knew they had that fact. Then I'd quickly regroup and grab 2 this time. And say how many are here very quickly. And if they could tell me 2 very fast, then I could quickly assess their math facts for 4. We add another one. How many are here? 5. I'd take some. How many are here? And we'd quickly move on up. When they start to break down, and it happens real quick, they'll hit a number and all of a sudden the fingers start to come up! And I know that's where they need to start to work.

So their number card has 3 numbers on it. The first number is the last number that they are successful with. The middle number is the one that they broke down with. And then the third number is where we're headed. So they've got an easy number, a medium number, and a challenge number. And then when their card is full, I reassess again. And they usually move on up (lintrv3, L. 233-277).

While groups got started at the number stations, Titus moved to a seated position on the floor with the remaining half of the class and explained a new game on place value. Dice were used to add numbers up to twenty. Students used flipcards, dice, and base ten blocks to show their understanding of place value. They were given the option of working independently or with another student. Although students were expected to make their own decisions about who they would work with, Titus helped them think through the process of how to group themselves in an orderly manner that would also help them work successfully.

At one point, 8 students were left to be assigned. Titus counted, "1,2, 3,4,5,6,7,8." She then asked them how to divide up. One girl mentioned 2 groups of 4. "Good! How else could we divide ourselves?" Other student responses were, "4 groups of 2," "2 teams of 3 and 1 team of 2." Students agreed the best method would be to have 2 on each team. Titus probed a bit. "What advantages are there for 2 in each team?" Students responded a bit with inconclusive answers. Titus asked them what the advantage relating to dice would be. One student called out, "Get more turns!" Titus asked students how they should pick their partners. Students said they should choose. Titus asked them, "Suppose you get picked and really want to go with someone else?" A student replied, "You be polite and go anyway!" They worked through this a bit and then Titus called on students to pick a partner. Ex: "Marjorie, who are you taking?" Marjorie: "Suzanne!" Students got materials and began to work. They chose their places on areas of carpet in the front of the room (10b2, L. 104-133).

As in most classrooms, not all students paid attention when directions were given.

Titus' room is no exception; however, students here have learned there are multiple solutions to such problems.

I asked one student to work aloud and tell me what he had to do since I wasn't there for the directions. He said he wasn't sure. I asked him how he could find out. He quietly pointed to his partner and grinned.

As I watched students work, Titus moved around the room observing and commenting to students. She then came toward me.

Titus explained the place value scenario to me. They had worked on these elements before, but never together in one game. She explained that students were moving through 3 levels: concrete, connecting, and abstract. This was a "Math Their Way" lesson. As students worked, Titus explained to me that she was jotting down anecdotal records of their progress. She quickly pointed out one student. "See--she rolled an 11. Instead of choosing 1 ten and 1 one (from the base ten blocks), she got 11 ones and then converted. That tells me where she is." I checked on one group of students at the number stations. These were the students putting jewels that add up to a number on their card using different combinations. Each combination went into a paper tub. Students wrote the number problem associated with each tub onto a piece of paper. A child explained to me that when a student completed one card, he or she was given another one with higher facts. Students worked in their groups well. No problems or interruptions were noted, and they were all very much engaged in their tasks. Titus shared some of her anecdotal records with me (10b2, L. 104-139).

In an interview following this observation, Titus states that today's math was not a formal lesson:

T I don't really consider what I did today a lesson, but more of a review...kind of a practice day...math practice day would be better to say. Because we practiced math facts...some of the kids were practicing math facts, and others were practicing place value. And we were...all of that is developmental, and you can't really do it as a lesson, you've got to give them the time...

P ...the opportunity...

T ...yeah, the time and the opportunity to work with it (1intrv3, L. 97-117).

At 3:20, students were instructed to clean-up and prepare for home. Events of the day were reviewed and reminders for tomorrow given as students ambled about the room stacking chairs, throwing out trash, grabbing coats, and talking to one another. One young boy carefully donned his hat backwards. Another student stood next to me to watch me work. His hat was backwards, too, I noticed. Through the commotion, students eventually convened once again at the Sharing Circle.

Jeremiah is at the Sharing Circle, ready to continue reading a story to the class. Jeremiah starts to read, while others continue cleaning at their desks. One little girl is working on her poetry. She has several long pieces of green construction paper, about 4 by 6, on which she has written a poem. She now is adding tulips and other flowers, some grass, and blue sky. I stop and talk to her a minute. She shares her poems, and I notice that she is actually working on her finished poem, and that she had done two rough drafts prior to this. She tells me that she is not a very good artist, but she can sure write poems! She is now making a border for her poem. She shares her poetry book with me, and tells me she is going to be a writer when she grows up. Titus stops by to tell me that this child, Jessica, is being tested for possible learning disabilities this week. She can spell and write beautifully, but can't read a word of her writing once it's in printed form! Another little girl comes over to watch. She is Jessica M.! Nicole B. comes and joins us. They like me to type their names without looking at the keyboard. Then the bell rings, more students leave, and the rest continue to hear Jeremiah's story or finish tasks at their desks. It is four o'clock before all the students are gone (1ob3, L. 179-210).

A day in Titus' classroom is one filled with much activity. Students are encouraged to speak out and to be themselves, while also respecting the rights of others. Students are given many choices; from choosing where to sit, to what to read and write, and choosing who they want to work with, if anyone. During all of the busyness of the day, parent volunteers and support personnel are constantly in and out, working with students individually or in small groups to review learning, enrich the curriculum by sharing personal experiences, read or listen to students read, or prepare materials for students. Students themselves are in and out, for often they choose to work in the hall to rehearse a skit or read aloud to a partner. Titus remains the boss, however, and does not hesitate to use her presence, her voice, or a very special look to let students know it is time to settle down. They do so without question, for they do not want to lose her favor.

What Differentiating was Occurring: Meeting the Needs of the Gifted

To identify noteworthy teachers of the gifted, two protocols were developed. The first was designed to document the types of overall differentiation that were occurring, and the second looked more specifically at how instruction was differentiated for individual gifted students.

While these protocols helped to identify specific teaching acts for the researcher, two problems became apparent in the first and subsequent observations. These problems were: 1) by focusing on the recording of the lesson on the matrix and observation sheet, the researcher was losing valuable information in the context of the lesson; and 2) the context of the lesson often had aspects of differentiation imbedded within it, and thus it was difficult to keep up with the relationships among the strategies used. A methodological issue became clear in this dilemma, and was resolved by confirming the necessity of one of Elliot Mishler's (1986) propositions. The issue was that the development of narrative needed to be grounded in the observations, and by focusing on the matrix, I was losing data. Mishler (1986) writes of the importance of context and narrative, and outlines four propositions. These are:

1. interviews are speech events
2. the discourse of interviews is constructed jointly by interviewers and respondents
3. analysis and interpretation are based on a theory of discourse and meaning, and;
4. the meanings of questions and answers are contextually grounded.

It is this last proposition that illuminated the need to use a narrative method of recording the observation to maintain a rich source of data for subsequent questions

and interviews. The researcher thus resorted to a simple but time consuming solution. Observations were recorded during site visits using a laptop computer, then coded after entering the written transcript into The Ethnograph using the matrix as a beginning set of categories. While many of the codes were preordained, other valuable ones emerged in this process. Codes were thus developed to target content, process, product, learning environment, and affective strategies, as well as the role of the teacher and the routines developed to present these strategies to students.

As a result of using a naturalistic research design in addition to the preordained characteristics of differentiation existing in the field of gifted education, Titus' methods of differentiation for gifted students reflects differentiation for content, process, product, learning environment, and affect within a framework of three principles. These are:

1. Principle 1

Students receive the same assignment but are evaluated differently.

2. Principle 2

Students are given individual assignments and mastery is expected.

3. Principle 3

Students are offered a choice of levels, and assignments are geared to help students work successfully at these levels.

These principles emerged as a result of four observations and five interviews after the observations. During my first interview with Titus, I posed the question, "How do you view differentiation?" Her reply can be interpreted as one aspect of her personal philosophy, and contains two of three principles on differentiation:

Well, I believe, first of all, that every child has a right to be taught at their own ability level. And...I see two ways to accomplish that when you've got a heterogeneous classroom, and that is that one way, that we mentioned this

morning, is to give everyone the same assignment and evaluate them differently (Principle 1); and the other way would be to give them all individualized assignments and expect mastery (Principle 2). I do...a combination of both, although I guess I prefer to lean toward giving everybody the same assignment but evaluating them differently. Because I don't think it's as noticeable to the kids. Because if everybody's got the same assignment, they think they are all the same (1intrv1, L. 29-47).

Principle 3 emerged later in this same interview, and illustrated how she differentiates for reading instruction:

I usually offer an easy, medium, and harder level, but connected by some central theme (Principle 3). These books each have their own reading contracts, which reflect different types and levels of work (1intrv1, L. 843-845).

The three principles work for Titus because they are undergirded by a classroom routine and teaching philosophy that is based on a developmental learning model that integrates reading, language, math, and the content areas. Within this framework, students are given choices in materials and assignments, and most of the tasks are open-ended. This chapter will illustrate how the precepts of differentiation by content, process, product, learning environment, and affect mesh with Titus' three principles. The overall framework for this section will follow a matrix design where each of the characteristics of differentiation (content, process, product, learning environment, and affect) will be analyzed in terms of principle 1, principle 2, and principle 3 before moving on to the next characteristic of differentiation. Text from interviews and observations will be used to illustrate points. An outline of the matrix follows to give the reader a visual representation of the sequence for this chapter. This matrix does not include the detailed, handwritten notes used as a working organizer for this section, which is part of the methodological log.

Site 1, Differentiation by Principles and Matrix

	<i>Principle 1: Same assignment, but evaluate differently (whole group)</i>	<i>Principle 2: Individual assignment, and mastery expected (individual)</i>	<i>Principle 3: Students offered a choice of levels, and assignments are geared to help students work successfully at these levels (small group)</i>
<i>Content</i>	1. Arts & People 2. Concepts: Fairy Tales 3. Broad based issues & themes Freedom unit 4. Integrate skills: Opening routine 5. Ethics & value systems 6. Interdisciplinary Rel.	1. Independent study of student's choosing Civil War & Jonathan	1. Broad based issues: Freedom Unit & rd. routine
<i>Process</i>	1. Critical thinking:contracts 2. Creative thinking:contracts 3. Higher level thinking: personal reactions (journals) 4. Open-ended questions and tasks 5. Metacognition & decision-making 6. Group interaction activities and simulations	1. Self-directed learning (math) Diagnostic/prescriptive approach to math 2. Metacognition and decision-making	1. Metacognition and decision-making

Site 1, Differentiation by Principles and Matrix

	<i>Principle 1: Same assignment, but evaluate differently (whole group)</i>	<i>Principle 2: Individual assignment, and mastery expected (individual)</i>	<i>Principle 3: Students offered a choice of levels, and assignments are geared to help students work successfully at these levels (small group)</i>
<i>Product</i>	1. Real audiences 2. Transformations	Enrichment extensions/research	1. Real audiences: reader's theater 2. Real problems: bulletin bd. assign.
<i>Learning Environ.</i>	1. Complex: multiple tasks simultaneously 2. Responsive L.E. 3. Encourage divergent thinking	1. Student choice in assign. 2. Student centered 3. Responsive L.E.	1. Flexible grouping 2. Responsive L.E.
<i>Affect</i>	1. Emotional connection to learning 2. Leadership roles/self-confidence 3. Develop values & release potential	1. Develop self-confidence 2. Concerned w/emotional levels of individual students	1. Leadership roles/self-confidence 2. Develop values/release potential

Differentiation of Content by Principle 1
Students receive the same assignment but are evaluated differently

Principle 1 reflects instruction that is presented to the class as a whole.

Content is chosen by personal values, personal interests, the curriculum for this grade level, and by student needs. Titus explains:

The themes I use in the classroom come from several sources. Primarily, they come from my own personal values and my own personal interests. They also come from the curriculum. And they also come from the needs I see of the students I am teaching at the time.

My personal values. Let's talk about that one. For instance, the first week of school the theme is, "How to be a good second grader." And what I do is I take, I spend time with literature and concepts that are very important to me. When you read my philosophy statement, my statement of philosophy that I have attached, you will see that courage is a very important characteristic I think. And I spend the entire first day doing activities around a book that deals with a child who did their very best, but yet failed. And he still had the courage to stand by his very best. To me, this is what life is all about. There are no guarantees we are going to be successful. We need to be prepared for our failures, but we also need to take pride in our very best, even if it falls short. So another theme that comes through is the power of listening. And each day of the week I take a different value that I want my children to understand and have. Having the courage to fix your mistakes. If you accidentally steal...if you steal something, having the courage to say I did, I'm sorry, and fix it by returning the item. We make a big deal about fixing your mistakes. Mistakes are inevitable. We learn from them.

Another way I choose themes is through the curriculum. Those things that are mandated by the school board and are explained through the curriculum.

Another way of choosing themes is through the needs of the students. For instance, if I see a social need, that the students are having trouble communicating and getting along with each other, I may choose a theme to work on such as friendship or something like that. So that's how the themes come across.

Other themes may come across not necessarily from my values, but from my personal interests, such as I really think our society does an inservice to our elderly. And I'm very concerned about the elderly and that children see them as people who have gifts and contributions still to be made, and so I do a lot of literature that includes the elderly in positive roles (1intrv4, L. 219-283).

Within the content Titus presents to the whole class, codings of differentiated instruction included Arts and People, Building Conceptual Understandings through Fairy Tales, Integrating Skills into Basic Routines, Using Broad Based Issues and Themes, and Establishing Ethics and Values Systems. It must be noted here that as evidenced by this teacher's testimony, a strong affective component is tied in to content selection. Emotional connections for learning take precedence over other considerations, and I will later discuss the limitations and strengths this produces for individual students.

Arts and People

Titus' personal biographical background strongly influenced her thematic unit on Artists.

...I was born in Wisconsin, and I'm the oldest of three girls. I was raised in a very musical family. And my parents believed...we grew up expecting to learn an instrument. We took piano lessons, for instance, and we're in the band, and sang...my family was very musical. This has had a great influence on me in the classroom. As a result, I feel that the arts have had a wonderful influence on my own cognitive development. And I believe that impact is something that no other subject can give to children. As a result, the arts are an extremely important part of my day, in my classroom. I received my undergraduate degree in music, and I started out as a music teacher. I taught music in this county for two and a half years, and decided that what I really loved was teaching, so I got certified and went back to the classroom. And so I brought my arts along with me to the classroom. I'm much happier in a self-contained classroom (1intrv4, L. 57-84).

In her thematic unit on artists, students learned about the personal and professional lives of Botticelli, DaVinci, Michelangelo, Rembrandt, Monet, Cassatt, Klee, Picasso, and Hopper. Abstract concepts were taught as they pertained to these artists. For example, as Titus read the book on Monet to her students, she emphasized the word "impressionism" and described it as "...like a dream...kind of blurry" (observ, L. 226-229). Values and affect were emphasized as she described some of the personal attributes of these artists, ranging from the jealousy between DaVinci and Michelangelo, to the death of Rembrandt's wife and his remarriage. This unit was put together as a result of a mini-grant Titus received from the county, called Project Great Idea. Her convictions behind her choice of content lead her to pursue support for books and materials outside of the school when necessary.

In discussing the artist unit and how it reflects differentiation for students, Titus justifies her use of whole group, open-ended activities to meet the diversity in her classroom.

...the artist book unit that you observed here in the classroom, even though everybody is in the same level of a reading book, the concepts and the material are so new to everyone, that differentiation occurs, especially since I teach the unit to my top students. I throw out much information, as you saw. But I don't believe in throwing it out to just my bright students. I believe everybody should have the opportunity to learn it. So I teach to my top students, throwing out much information, many art concepts, but anybody else who is able to grasp it is welcome to do so. The difference comes in my expectations. I expect my brighter students to learn it and to retain it. I don't expect my slower students to retain the information in the same manner. I teach them more for exposure, whereas I teach my gifted and brighter kids for learning and retention...My expectations vary for each child, but everyone gets exposed and everyone is given the opportunity. And this goes with the philosophy that I, like I mentioned earlier that I have

above my door, 'Our similarities make us equal, our differences make us unique' (1intrv2, L. 171-205).

The open-ended assignments that accompany this unit are covered under the sections on process and product extensions of learning. With regard to content, it should be noted that a variety of reading materials were present in the room to enrich the artist unit. Provisions were also made to support students who had difficulty in reading the selections independently. Books were recorded on tape and parent volunteers worked individually and with small groups of these students on a regular basis. This enabled Titus to proceed with advanced concepts without falling into the trap of "dumbing down" the curriculum to allow students to work successfully.

Building Conceptual Understandings through Fairy Tales

Earlier, in the portrayal of Titus' Day, a chart was documented that described fairy tale motifs. These are brought to fuller understandings in the unit on Cinderella stories. Books from different cultures that are read aloud and tracked on a chart for this unit include: Princess Furball, by Charlotte Huck, The Egyptian Cinderella, by Shirley Climo (Egypt), Yeh-Shen, by Ai-Ling Louie (China), Mufaro's Beautiful Daughters, by John Steptoe (Africa), Moss Gown, by William Hooks (Southern USA), Tattercoats, by Joseph Jacobs (England), and The Rough-Face Girl, by Rafe Martin (Algonquin Indians) (observ, L. 329-341). Items tracked in each of these books and displayed in chart form at the front of the room include the title, author, country, name for hero, villain, motif, opening elements, phrase of three, magic, and closing phrase (observ, L. 315-326). Titus explains the evolution of these charts to organize content:

The language charts, that is a legitimate technique that has been documented in *Language Arts*, which is a journal for National Council for Teachers of English, that they put out. Basically, what those charts are is a record of classroom discussion. When I read a story, for instance if I want to focus on a particular skill, say problem and solution in fiction, I can choose the themes and we've done this with books from Steven Kellogg. And every day I will read a different book by Steven Kellogg and we will plot on the chart the problem and the solution that we found in the story. The chart helps focus the discussion and it also becomes a record of what the children thought. In addition, we're comparing books by Steven Kellogg so that the books are related by theme (Lintrv4, L. 519-540).

As with the artist unit, content presented in the Cinderella or fairy tale unit is presented in a manner that challenges gifted students to seek connections and think critically. An array of open-ended and higher-level assignments are used as follow-ups to these whole-group lessons, with products based on transformations of the fairy tale motif.

Broad-Based Issues, Themes, or Problems and Content-Oriented Units

The literature on curriculum for gifted learners stresses the use of broad-based issues, themes, and problems to challenge students to think abstractly and to make connections within and across issues. An example of such a unit might be the study of "beauty" or "liberty." In Titus' whole language, thematically based classroom, units naturally are interdisciplinary in nature, and often lead to broad-based issues and themes. Titus' training and experience flourish here, and themes within a theme are often found in her units. Sometimes they are abstract in nature, such as the Freedom unit Titus will discuss in the section on content and Principle 3, or her "Trail of Tears" unit on Native Americans, which examines issues relating to a subculture within a population.

At other times, content-oriented units are taught, such as the study of the Solar System (1ob3, L. 6-12). Content units require students to acquire a large knowledge base using a variety of process skills, and extend student thinking through higher-level thinking skills. Differentiation for both types of units follows the already prescribed reading routine whereby material is presented to the class as a whole, but choices are given in varying degrees of difficulty for follow-up assignments and students choose from a variety of reading levels for small group work. An example of her theme planning form can be found in Appendix A (Theme Planning Form).

Integrating Skills into Basic Routines

Nowhere is Titus' expertise more evident than in her ability to make use of the "teachable moment." From the opening routine documented in Titus' Day where math, weather, problem-solving, and language skills are meshed into a polished repertoire of questions and directives, to her ability to help children make their own decisions by modeling cooperative understandings and social skills, Titus demonstrates polished pedagogical routines. In these situations, learning is brought out of isolation into contextual understandings that require students to listen to one another as well as to their teacher. During one math observation, Titus gave students an assignment that required them to graph the responses of ten of their classmates. Through quick questioning, she helped students mentally outline the steps needed to complete the assignment successfully.

How would be the best way of handling this? Handwriting paper to write down what the people say, or use your learning log? Class calls out unanimously, writing paper! Dwight, how did you get your lines so straight on your graph? Used a ruler...Yes, I want you all to use a

ruler. Also, Dwight left something out...what is it? Yes, a title. I want you to include a title (1ob3, L 106-116).

In addition to integrating skills into daily routines, Titus' use of a thematic, whole-language approach to teaching enables her to make connections in the basic subject areas. The following passage illustrates how read aloud time merges into a mini-math lesson.

...but today we read aloud a book, The Seven Chinese Brothers, which is around the room somewhere. And then later they went to art, and when they came back from art they did a problem solving activity based on the Seven Chinese Brothers. Seven brothers, if they each ate one fish at every meal, how many fish would it take to feed the brothers for a week. In cooperative groups, it took us 45 minutes to figure that one out! But we got it! Most of them got it, or at least had a plan that would have been successful if they had enough time (1intrv1, L. 797-815).

The integrating of basic skills into opening, language, reading, math and sharing routines will continue to be evident as we review other codes of differentiating along with Titus' three principles on this topic.

Establishing Ethics and Value Systems

Brandt (1986), in a conversation with David Berliner, speaks of how expert teachers possess domain specific knowledge and how they use this on the opening days of school to let students know they are the boss. He terms these routines, "grooving the kids."

Through content based on ethical standards and value systems, Titus "grooves" her students with regard to appropriate behavior. During an earlier discussion of how she chooses content, Titus mentioned her themes of "courage" and "how to be a good second grader." In addition to these whole group themes, Titus' emphasis on guiding

values is evident in the questions she asks students as they discuss a piece of literature. After reading Moss Gown, Titus asked students a series of questions as part of the chart they were completing for the unit.

Who was the hero? Kris-Kris woman. O.K., explain to me why she was the hero. O.K., someone else explain to me why she was the hero...She gave her the dress. Explain why else. But the Kris-Kris woman did something else very heroic. What else did she do? She gave her advice, all right! What else?...Why is the father not a villain? How many of you agree with Jen (Observ, L. 349-358, 367-370)?

Through purposeful selection of content and questioning, Titus "grooves" her students toward standards that align with her personal philosophy. This area will be examined more fully in the section dealing with affective strategies in her classroom.

Differentiation of Content by Principle 2 *Students are given individual assignments and mastery is expected*

For a number of reasons, only a limited amount of content was found to be individualized to the extent that it was totally different from the rest of the class, for gifted students in Titus' classroom. These reasons have to do with her use of student choice and open-ended assignments which often allow students to pursue content of their own choosing, her personal philosophy of presenting abstract and broad content to the whole class to give all students the same opportunities, and the needs of her students, which are currently met within other areas of differentiation. One gifted child in the classroom did have a desire to learn more about the Civil War, and Titus worked with him to complete an independent study on this topic. During one of my observations, I saw Jonathan present his work to the class.

Jonathan next shared something with the class. He was telling about the Civil War and used a marker and large piece of construction paper to demonstrate his thoughts. After his demo, Titus asked Jonathan some questions. Where is Virginia...what was the difference between the Confederacy and the Union? Jonathan went into quite a description of both, and tied in Abraham Lincoln and how he said states could not emancipate. Students asked Jonathan questions. He called on them and answered their questions. He then shared hats that he drew belonging to the Confederacy and the Union. Titus asked what the difference was between them. Jon explained this by color and shape., He then held the hats against his "map" and showed who wore them, substituting the word Rebel for Confederacy, and Yankees for Union. Titus put a time limit on this sharing, telling students there was time for one more question. Afterwards, he sat down in the circle with the other children. Titus told him to put the hats away now (Observ, L. 283-308).

In addition to facilitating gifted students with independent studies when appropriate, all students have opportunities to choose their own books for independent reading. Students are held accountable for their choices by scheduling a time to discuss this book with an adult.

You saw the reading groups, you saw the sharing circle where we do whole group activities, you saw some writing time, but you didn't see the independent reading time, which is like sustained silent reading, only with accountability. Because then, well actually, you did see the end result, because when Mrs. Rooney was pulling kids back there, they were bringing back the books they've read independently in class and they were having conferences with her on those books (lintrv1, L. 112-124).

For the most part, content is presented in whole group fashion with opportunities provided for enrichment within student contracts and choices of assignments. A variety of reading material on different levels is available in the classroom. Spelling and math are areas that are highly individualized in this classroom, but discussion for these areas will be reserved under the heading of process skills.

Differentiation of Content by Principle 3

Students are offered a choice of levels, and assignments are geared to help students work successfully at these levels

Principle 3 is found in Titus' reading routine. Here, students are offered a choice of books that correspond to a theme. The books and their respective contracts differ in their level of difficulty. Titus explains:

I usually offer an easy, medium, and harder level, but connected by some central theme. Next month, in February, we do a big unit on Freedom, and my medium book is called George Washington's Breakfast, which is about, well, we look at three times in history when America has had to fight for freedom. And so the book George Washington's Breakfast is medium level, and the easy book is The Drinking Gourd which is an "I Can Read" book, and that follows the underground railroad and we talk about Harriet Tubman at that time. And the hard one is a chapter book. It's one of the first chapter books that I offer, and it is a biography of Martin Luther King. And the kids...the contracts, of course, the length, the Martin Luther King Book, hardly has anything on their contract, because they spend most of their time reading. And then we meet daily and have discussions (1intrv1, L. 843-865).

When I asked Titus if it was possible for gifted students to underachieve by choosing down, she acknowledged that while this is possible at times, she keeps a record of the books students are reading and tends to look at the "whole picture" when this appears to be the case.

On the other hand, I do have gifted children who will choose down, to a slower level. And when I stand back and look at the whole child, I sometimes realize that the child is being wise. For instance, if a gifted child or a bright child chooses my more average reading book to be in for the week, I like to look at what they are reading independently, because frequently their independent reading may be a very challenging chapter book that is taking a lot of their concentration. And in order to balance their life, they have intuitively chosen a more easy reading book. And I think that's wise. That's what we do as adults. When we are burned out, we don't pick up War and Peace, we may look to a

Danielle Steele novel. And I try to encourage children to move with what they are more comfortable with (1intrv2, 150-171).

Content related to principle 3 thus puts the responsibility on the shoulders of the students. At times, this may work to a student's disadvantage, for he or she may not only consciously choose down, but mistakenly choose up. Titus does not view this as a problem, for her experience has proven to her that students tend to want to work where they will be successful. This also ties in with her personal philosophy on what teaching is all about; helping students learn to make appropriate choices for themselves.

Ownership is a very important concept I think in student learning. I don't like to be told what to do. I don't like to be told what I must do in my classroom. I like the right to make it mine, and own it; therefore I don't feel I have the right to imply learning on children in that manner. I let children choose...there's a lot of choice built into my classroom management techniques. I think choice is a way of differentiating. I offer accelerated material, average material, and weak material. But I don't tell the child which material they must work with; I let the child choose. And I have found that over time, children will quickly find where their comfort level is. Those children who are weak, if they have chosen the accelerated material or the challenge material as we call it in the classroom, they will quickly learn how difficult it is, and it is not a comfortable place. They will not choose it very often again (1intrv2, L. 125-150).

Content in Titus' classroom emanates from who she is as a person. From her childhood experiences in music, to her personal interest in art, to her personal philosophy that all children should be given equal opportunities to work with accelerated concepts, her choices are made. As the author of two books and currently working on a third on curriculum, Titus stays involved in selecting content and tying it in with basic skills.

Differentiation of Process

Several themes emerged from the data for each of the principles of process skills. Under Principle 1, process skills were embedded within two routines: Whole Group Modeling and Individualizing within Whole Group Work. These routines allowed Titus to present the opportunity to learn more complex process skills to all of her students, a belief she feels strongly about. Principle 2 steers the process skills in line with Titus' developmental model, where a diagnostic/prescriptive approach is used in spelling and math to accelerate and challenge gifted students as well as to provide opportunities for success with students who need more support. Under Principle 3, reading is differentiated through discussions and skills appropriate to level and content. These discussions emphasize higher-level thinking and group interactions. As with the selection of content, the teaching of process skills emphasizes whole-group instruction with modifications made within this structure. Why Titus is partial to whole-group instruction forms the starting point for the section on process.

Differentiation of Process by Principle 1

Students receive the same assignment but are evaluated differently

My first interview with Titus occurred late in the afternoon in her classroom, after I had spent the greater part of the day observing. We discussed what had occurred, how she structured her day, and then moved into how she felt about differentiating instruction. A reflective thinker, Titus went home afterward and felt unsettled about parts of our discussion. What troubled her most was when our

discussion focused on sub-populations in her classroom. Not wanting to be misunderstood, she dictated some of her concerns into a cassette for me. To understand how Titus differentiates process skills for her whole class, we need to understand her beliefs.

First of all, let me start by saying I think that in American education differentiation is the key to assuring everyone a quality education. Especially since in our society we believe that all children have a right to an education. I don't see how that can occur without differentiation. My problem, I think, comes from the fact that I have trouble with the term "gifted education" because in my mind that implies a division amongst the student body. And I don't think differentiation should divide children into categories. I think differentiation should mean different applications but that the children remain a unit. I don't know that this is philosophically wrong because gifted education always says that we must remember that children are children as well as being gifted. I believe we must be teaching to the needs and the interests of all of our children, therefore I think differentiation needs to go across all ability spectrums (1intrv2, L. 12-41).

Titus is most comfortable teaching to the whole class and providing modifications within this structure. Her room is filled with charts that model higher level thinking skills, with assignments that are open-ended, and with students busily choosing the activities they want to complete. The foundation for helping students learn to make good choices in the area of process comes from daily sessions of seeing these skills modeled by their teacher and peers.

Whole Group Modeling

Three process skills were woven into the daily routine that involved whole group modeling. These are higher-level thinking, deductive reasoning, and the teaching of problem-solving skills.

Higher-level thinking

Titus' use of charts to compare and contrast the content of different books within a theme demonstrate the use of higher level thinking skills in a daily manner. Not all students can readily discern why the hero was the hero in each story, but by providing the opportunities for all to participate, students learn from one another. Earlier, in Titus' Day, readers saw how the chart on artists was set up, and learned that this technique was one the teacher developed through professional reading. Titus keeps these charts posted for the duration of the theme. Some students need the daily review of these concepts, while others use this time to forecast the next story.

Deductive reasoning

Deductive reasoning skills are brought into focus during whole-group storytime. In preparing to "read" a wordless picture book, Titus shared a number of books and asked students to determine which one was science fiction, a term they had been studying. Throughout the story, Titus "read" by asking students questions.

"Let's see what these are for...he's riding it where, now?" The child in the story rode past Mt. Rushmore and the Statue of Liberty on the Stick Horse, and Titus continued to probe. "Which of these buttons do you think he just pushed to get here? Here he's getting ready to push a button. Which one do you think should push? Why?" Back to the book...child is now on the moon. How do they know this? Students tell her they know it's the moon because of the craters (1ob3, L. 30-42).

Story time is not a passive activity in Titus' classroom. Students are visibly involved as their teacher probes with questions to develop deductive and analytical thinking skills.

Problem-solving skills

Modeling problem-solving skills with the whole group occurred during a math observation, too, when students were asked how they should divide themselves.

At one point, 8 students were left to be assigned. Titus counted "8." She then asked them how to divide up. One girl mentioned 2 groups of 4. "Good!" How else could we divide ourselves?" Other student responses were, "4 groups of 2," "2 teams of 3 and 1 team of 2" (10b2, L. 104-110).

In discussing this impromptu lesson, Titus mentioned that, "...it was an opportunity for doing some pre-multiplication skills, which some of the students were ready for" (1intrv3, L. 389-391).

These examples illustrate how students are given opportunities to strengthen their critical and higher-level thinking skills, deductive reasoning, and problem-solving skills within whole-group activities. Within this group work, Titus continues to probe and refine.

Individualizing Process Skills within Whole-Group Work

While modeling higher-level thinking skills in whole-group activities, Titus individualizes her questioning to meet the needs of gifted students. She does this four ways: by probing further with gifted students, by asking open-ended questions, by helping students make meaningful connections and by questioning them on their metacognitive processes.

Probing When Titus "read" the science fiction book to the class, she probed Jonathan, a gifted student, deeper than the others. Jonathan pointed out that he suspected the child was getting ready to go back in time. "What makes you say that?"

asked Titus. He explained that the numbers on the clock were going backwards.

Titus continued to probe and gave Jonathan appropriate wait-time. He then suggested that there were pictures of dinosaurs on the back of the book, and that is going back in time. Titus turned the page to reveal...dinosaurs! She proudly exclaimed this to the class and reaffirmed to Jon that yes, they are going back in time (1ob3, L. 52-63).

Open-ended questioning Open-ended questions are continuously asked throughout the day. These are as informal as "How many ways can we add up how many days we've been in school?" to "If you found a stick horse in your backyard, and you could only press one button, which one would it be and why?" To this question, Jonathan, who connected with going back in time and was appropriately rewarded by his teacher, responded, "I want to go back in time to see my grandmother because she died." Mallory modeled after Jon, and stated that she wanted to go, "Back in time to see myself as a little baby" while Josh, the free-wheeling student proclaimed, "To the future!" (1ob3, L. 83-84).

Meaningful connections Titus is not so much interested in producing these divergent and higher-level responses as in helping students make meaningful connections and understanding the process they used to arrive at these conclusions.

So I'm talking about meaningfulness, and I want active thinking when the children are involved. And that involves higher-level thinking. I don't want them to regurgitate back. So I really want them to be making connections: "Oh, I get it. That's like such and such!" and I want them to be relating things (1intrv4, 320-328).

When Jon presented his independent work on the Civil War, Titus asked him to clarify his thinking before the class. He used terms that were new to him and many of his

classmates, and she wanted his work to become meaningful beyond the terms. "What was the difference between the Confederacy and the Union?" "Where is Virginia?" Jon was challenged to make connections, and did so.

Metacognitive thinking Metacognitive thinking refers to analyzing one's own thinking processes. Titus often asked students to support their answers, thinking that this was a metacognitive skill. It was not, but could be termed giving "evidence of reasoning," useful in helping students understand the processes they used to arrive at their conclusions. Titus' probing of students' thinking was apparent as students responded to whole-group activities (Does Jon have a good plan?) and as students turn in work.

Explain your graph to me...tell me what it means. Josh explains. O.K., tell me two true things about your graph. If you were going to tell me two true sentences about your graph, what would they be (1ob3, L. 144-150)?

Titus also uses a planned, formal method to help students think about their thinking and to help her evaluate where they are in their thinking. This is done through the use of learning logs.

I'm interested in each individual and where they are today in their personal development, and so the learning log becomes a collection of their work and a timeline of their progress. So if we've looked at a graph, I may ask them to take their learning log out and write four true facts that they can prove from the graph to assess their thinking and their understanding. Or after we've done a lesson for instance on the Trail of Tears, when we were studying Native Americans, I'll ask them to get their learning log out and in ten minutes write down everything that they can remember. So the learning log can become a timeline of learning and thinking progress as well as a capsule of what they've learned for that particular day (1intrv4, L. 421-442).

Titus' interest in what students are thinking occurs throughout the day by probing students to develop their thoughts, giving them open-ended questions to develop their creativity, and fine-tuning her questioning to develop meaningful connections and "metacognitive awareness." These processes are consistent with her deep-rooted belief that one of her missions as a teacher is to enable all children to become life-long learners.

Differentiation of Process by Principle 2

Students are given individual assignments and mastery is expected

Process skills falling under Principle 2 are aligned with Titus' developmental model, where spelling and math is accelerated to challenge gifted students at the same time support is given to less advanced students. Process skills emphasized include self-directed learning and continued emphasis on open-ended assignments when appropriate.

Developmental Approach

Both spelling and math are taught in a developmental manner that focuses on students achieving basic understandings in stages. Provisions are made for all students to complete practice exercises independently during a prescribed time, and Titus assesses their progress through observation and anecdotal records, as well as with periodic quizzes and tests.

Spelling

Spelling, as you have seen it in my classroom, is individualized. Every child has a list of words based on their ability and their needs and it is taped to their desks (1intrv4, L. 653-657).

Spelling is done briefly each morning. "Today they had to get their words in their spelling dictionary, which you saw when they came in...and lists also went home to study (1intrv1, 686-689). Spelling is brought into further focus during the course of the day as students respond in their journals and learning logs, and participate in structural analysis lessons. Titus encourages students to use their weekly spelling words during these open-ended assignments.

Math

Math facts, like spelling, are learned sequentially and a self-directed approach is also taken here to allow students to progress at their own rate.

Learning math facts is a sequential task and each child is in a different place in the sequence. Open-ended assignments on this would not work, so each child has a range of three numbers, and that is the target number for them that they are working within. They all get the same ASSIGNMENT to do with those numbers, but the numbers and the levels they are working at is different. Mastery is expected (1intrv4, 668-677).

During the math observation cited in "Titus' Day," children were working with manipulatives, paper, and pencil to understand and extend their knowledge of math facts. While mastery is expected, other self-directed math activities focus on students practicing to work toward mastery. Students who are able to "abstract" move forward, while support is provided for those still working on a concrete level. It is important to note that the gifted student is not used to teach the child developmentally behind.

Zack was actually adding in his head, and before he pulled it, he knew what number was going to appear at the top of the page before he pulled his flip charts. So Zach's already over here, abstracting...and I made note of the kids as to where they are. I can then move, like Nicole who was the one who was having trouble at the concrete level. And then I can just, through questioning and sitting down and playing

the game with her, show her how I think, moving her along, hopefully. But that's something I think that she's got to see. And I can't move her before she's ready to go...and hopefully, my showing her how she's thinking and demonstrations of how to think will help (lntv3, 169-202).

Titus struggles with her demons when she differentiates instruction for individual students. She knows that with the diversity in her classroom, she cannot afford not to individualize, but in doing so, she is at odds with her personal philosophy of creating a climate where all students perceive themselves as equal to one another. She begins by telling me why individualizing is necessary:

Well, when you're dealing with children, the one thing is we all know is that no two children are at the same place in their learning. So we do need individual assignments (lntv4, 632-637).

Later, in this same interview, she reflects on why she dislikes setting up individual assignments.

And I should also add that the second principle is my least favorite because it is very clear to kids who is ahead and who is behind. They can look at someone else's card (in math) and be able to compare (lntv4, L. 678-683).

As our interview progressed, she continued to reflect on why this bothered her.

And principle 2, where you've got these individual assignments, allows children to compete with each other, and I think that's wrong. I think competition should be within themselves (lntv4, L. 699-703).

The impact this dilemma imposes on Titus' overall ability to differentiate instruction is examined more thoroughly in her narrative. At this point, it is important to note that despite these conflicts, Titus recognizes the importance of providing opportunities for all students to work at levels commensurate with their achievement and ability. She

uses self-directed learning strategies and open-ended assignments (when appropriate) as tools to accomplish this.

Differentiation of Process by Principle 3

Students are offered a choice of levels, and assignments are geared to help students work successfully at these levels

Process skills that are offered to students on different levels correspond to the material that is covered during reading groups. As mentioned earlier, Titus offers three different levels of books with contracts that correspond to these. These books differ by reading difficulty and level of abstractness. "If you're in a book above your reading level, it's usually above your thinking level. But I've found it usually takes once or twice in that situation, and they don't do that anymore" (1intrv1. L. 996-1002)! She explains the work and process skills done by different groups, which emphasize group interactions, abstract and higher-level thinking, and diagnostic skill work when necessary to lead to more complex thinking processes.

Focus on group interactions and abstract and higher-level thinking

Titus explains how process skills reflect the reading and content levels of the different books centered around a common theme. Modifications are made to accommodate each level.

- T And the kids...the contracts, of course, the length, the Martin Luther King book, hardly has anything on their contract, because most of their time is spent reading. And then we meet daily and have discussions.
- P Tell me a little bit about the discussions that you have with them.
- T Ah, my discussions, generally, with reading groups, is generally on

comprehension and, ah, vocabulary, and issues. For instance, Jim Crow laws when we get to Martin Luther King are very foreign. We have to talk about what they are because they are very prominent throughout the biography that we read. So we spend a lot of time talking about that. The contract suggests, one of the options is that they recreate a certain scene from the book. Like the first time Martin Luther King discovered discrimination on a bus. And we take that scene, and the group goes off in the hallway as a group, and then we recreate the scene and come back and present it to the class and talk why this was important in his life. So those kinds of things are on that kind of a contract, whereas the kids that are in the lower level books, that are more basic, their contract still may involve making a chart and finding short vowel words...

P More skill oriented...

T Yeah, more skill oriented. The George Washington book has a thing, he had ten dogs, and we write the names of the dogs in alphabetical order and just write a description of each of the dogs...a picture dictionary where you have to place things in alphabetical order but you're using vocabulary from the book. So, it tends to reflect the level of ability of where the kids are working.

P So are there more abstract things in the harder books?

T Yeah, because, they are ready for more of that. Supposedly they have those concrete skills or they wouldn't be able to get through that book (1intrv1, L. 860-916)!

This example illustrates Titus' ability to provide competent students with an assignment totally different from lesser-achieving students. Because the students are working in the small group of their choice, she is not concerned with issues of equity and equality. The higher-achieving students engage in an abstract discussion while the lesser-achieving students use small group time to reinforce basic reading skills.

Diagnostic skill work

Gifted and above average students spend more time discussing issues and less time doing skill work. Titus' goal is to give them time to immerse themselves in reading material and to carry on a group discussion that focuses on concepts and

issues. At times, however, skill work is emphasized and reinforced by mini-lessons, and then individual follow-ups. This is usually done after an informal assessment, and is used to help those children needing further reinforcement.

Now I will take a group, and we'll go and work with cause and effect for a week, and from then on I'll pretty much individualize through the contracts. Who needs help, and who has got it...As far as doing little workshops, sometimes I do that, too. Or I'll send them off to the reading specialist. Take these five kids today. They need to work on cause and effect and here's how I suggest you proceed (lntv1, 343-349).

Process skills are taught within the context of the content being used, and within the developmental level of the students (or groups of students). Skills for gifted and above-average continue to be more abstract and involve critical and creative thinking, as well as group interaction and decision making. Provisions are made to teach and reinforce appropriate skills when necessary, and skills are viewed as a pathway toward more complex ways of thinking. They are a means, not an end.

Differentiation of Product

In traditional classrooms, products are used to measure learning outcomes, and usually take the form of quizzes, tests, and written reports. The literature in gifted education states that products should be based on real problems, be presented to real audiences, include transformations, and utilize self-evaluation.

Within Titus' second grade classroom, many choices were available for students to transform their knowledge. However, the end "products" were probably more "activities" than actual products. This is because students had a short amount of time to complete them and guidelines or rubrics were not usually developed to help guide the process leading to the product. In addition, these activities did not always reflect "real problems." Titus elaborates on why, and then thinks about what she considers "products."

In a classroom, because you're in a lab setting, they're really simulated problems. And from that point of view, there's a lot of things that go on all the time. Working with story setting, asking them to make a creative map to show the travels of the character, asking students to interview five people in the community for their definition of freedom, and then coming up with their own definition, bringing to school an object that they think defines beauty...(lntv5).

Again, in defining products, Titus tends to mention activities. These activities are real problems for students, and are used to help students transform knowledge. Because these experiences are different from the paper/pencil tasks used in many classrooms to assess learning, they will be examined here under the "guise" of products.

In Titus' developmental second grade classroom, we see a combination of best practices in terms of learning theory for gifted and at-risk populations, while

addressing students' learning styles. Two significant themes emerged in terms of "products": 1) Meaningful learning is defined as real problems as perceived by the student; and 2) Learning occurs as a result of practice. Before examining products in terms of the three principles, it is important to understand the context or parameters for these products.

Meaningfulness

As noted previously, Titus links meaningfulness with higher-level thinking and making connections. She wants students to relate to learning. In viewing the types of products students engage in to practice or refine learning, the measure of meaningfulness can be applied to the choices given students. These choices relate to the personal practical knowledge Titus taps into when she plans her lessons.

When I'm planning an individual lesson, two things are very important to me. First of all, I want the child to be able to stay actively involved. I'm talking about mentally active. Sometimes the way to do that is through physical activity. Sometimes the way to do that is through communication with other children, and talking and being in a social setting. But I want the activity to be something that the children WANT to listen to. They WANT to attend to, and they WANT to try. Equally important, is that I want the activity to be meaningful. It used to be in my teaching that I thought of trying to get the children to get some meaning out of it. Now I understand that I want something more than that. I don't want the child to just understand the activity. I want the activity, in addition to understanding it, to be meaningful to the child. It is when we have meaningful activities... meaningfulness to me implies caring...I want the child to care about what I am teaching so that they will have the desire to retain it. That's not always easy. But the caring is an important part. So trying to make the lesson meaningful and relate to the child and where they are this time in their life, is an important consideration in the lesson (1intrv4, L. 287-320).

Meaningful products meet students' current needs in some way. They allow students to work on a developmentally appropriate level and appeal to students' interests and

abilities. Provisions continue to be made for student choice, an area that will be addressed in depth under the section, "learning environment."

Real audiences are most often classmates, but frequently involve other classes and parents. Titus has a highly refined set of routines I termed, "sharing time," to meet both her and her students' needs to share ideas and products. Sharing time will also be defined under the heading, "learning environment."

Transformations and applications of knowledge take place regularly to help students relate to learning, and usually occur as follow-up assignments to whole group activities. These are often done in one of several journals. Again, although these are not true products, they reflect the changing of knowledge into a concrete form for the purpose of assessing students' understandings of concepts.

"Journals" I was taught to use in my graduate program. I think they work very well. Every year I change the types of journals I use, I change how I use them. Based on my own personality, I guess, things that I was not good in maintaining or having the children maintain, or things that the children had difficulty with, and I think that might be done in a more meaningful way. So every year I kind of change my journals. I used to have dialogue journals, where the children wrote to me and I wrote back. This year I'm experimenting with dialogue journals with parents. The children are writing a letter to their parents once a week; the journal goes home and the parents respond back in letter form in the journal. So we have that running record back and forth. It's meaningful writing. They also have a reading log, which is their reading work response. When we talk a little bit about evaluation, I will talk to you about the fact that I no longer rank my students, and I'm interested in each individual and where they are today in their personal development, and so the reading log becomes a collection of their work and a timeline of their progress. They also have a learning log, and that's the same thing but more content oriented. So if we've looked at a graph, I may ask them to take their learning log out and write four true facts that they can prove from the graph to assess their thinking and their understanding. Or after we've done a lesson for instance on the Trail of Tears, when we were studying Native Americans, I'll ask them to get their learning log out and in 10 minutes write down everything that they can remember. So the learning log can become a timeline of learning and thinking

progress as well as a capsule of what they've learned for that particular day. They also have a spiral notebook. Spiral notebooks I don't ever really look at, because they are more like an author's notebook. The children start stories in them. Sometimes they finish them, sometimes they don't. If they finish them and they want to share them with me, they bring them up to me and then I look at their spiral notebook. But it's an ongoing working log of ideas, and that is something that I don't use for assessment. It's one of those things that's "in progress." I can look at it, but there's usually a lot of incomplete ideas and things in there. It's a working notebook rather than a product notebook (1intrv4, L. 395-459).

Here, Titus' concern is that learning is meaningful to the child. Her thoughts on learning as a process, where products indicate where a child lies on a continuum of skills rather than how much effort was put forth to "earn" an A, B, C, D, or F, are also apparent. Meaningful learning means students are directly involved in activities that are relevant to themselves. These activities involve transformations and applications to develop greater meaning and ownership, and are shared with student audiences as part of a "sharing routine" that holds students partly responsible for a collaborative learning environment.

Learning Results from Practice

In accordance with her developmental philosophy of teaching, Titus uses products to indicate where on a continuum a child is working. This information is then used to provide support or extensions for learning.

I think kids really need time to practice. I come back to my own musical background. Piano teacher gave me an assignment on Monday; I went home and I practiced. Nobody evaluated my practices. My final evaluation came the following Monday when I showed up for my lesson again and I had to perform what I had worked on. So I think this is the way we need to be teaching in school as well. We need to be able to give children practice time. There are times when they may do math, for instance, a math worksheet or something to review a skill, and the kids will come to me and say, "Do you want this?" and I'll say, "No,

I'm not after that. That was a practice page." And I won't even look at it. There are other days when the paper was for assessment, and yes I will collect it so that I can double up and make sure that what I'm observing in the classroom is coming through on the paper, and that we are being consistent. So I'm re-thinking my assessment. I no longer think of that teaching model that we were taught, where you review, teach new material, assign, and assess. I don't follow that. Sometimes I follow more of a review-review; is very important. Review I think needs to stay there. Review, teach new material. Review, teach new material. Review, teach new material, and then maybe come through with an assessment that ties all the lessons together. But this is all developmental learning. Hopefully, what I'm doing is meeting each child where they are and helping them develop in the manner they are comfortable, and to the best of their ability (1intrv4, L. 762-786)..

Titus makes a strong distinction between final products and those done for practice.

She draws an analogy between her childhood experiences as a musician performing for an instructor with her current role as an assessor of students' cognitive performance.

This analogy illustrates her belief that students should feel safe when they practice, and not all performances need to be assessed. The next section will address how Titus' biographical past combines with her knowledge of learning theory to impact upon classroom decisions.

Differentiation of Product by Principle 1

Students receive the same assignment but are evaluated differently

Most of the products that result from whole-group instruction are done for practice and are evaluated through anecdotal records and observations. Students are evaluated to define their instructional levels, and provisions are made accordingly.

Products (tangible and intangible) that follow whole group instruction centered on real problems, were presented to real audiences, and involved transformations.

Real Problems

As mentioned earlier, "real problems" in Titus' classroom refers to problems that are meaningful to students. Examples of these checker most of her lessons, beginning with her opening routine in which she asks students how many are present in their class today. "We have 27 students, and 3 are absent. How many are here today" (observ, L. 37-40)? In another math observation, students estimated how many beans were in a jar, and wrote their numbers on small sheets of paper before showing it to Titus who then asked them to sit on the "too high" or "too low" side of her chair. Another math lesson culminated with a graphing experience. Students were instructed to, "...make a graph for me. I want you to talk to 10 people in the class and find out if they are going back in time or into the future" (1ob3, L. 98-102). After reading a story called, The Snow Child, in which a 70 year old couple suddenly get a child, Titus plays devil's advocate with the class:

...you know, 70, aren't these people just too old to have a kid? And that's all I have to say! And gosh, it just goes, because everyone has an opinion on whether that couple should have that baby child. So we get into some issues like that. Well, maybe that's a good parent, and you know, that kind of stuff (1intrv1, 960-972).

In these situations, products were meaningful to students because they helped students further their understandings of their world. Students were asked to make sense of the world within their classroom, yet the open-endedness of the products or assignments allowed students to go beyond and to use multiple strategies to arrive at conclusions.

Real Audiences

Many of the products done to assess learning through transformations involve drama. While these skits are usually put together in small groups, they become part of the whole and are presented to classmates, other classes, and visitors.

T And, sometimes at the end of a week or at the end of a unit, the kids will have things like puppet shows or plays that they've put together that we need to share.

P And then, what kind of audience do they have?

T We do it for the whole class! And Mrs. Kilarney (reading specialist) sometimes gets caught up in it and stays extra long so she can watch, too. Because they're kid productions. A lot of time these productions and things, I don't see until they perform them. I want that play atmosphere. So it's not prepared for someone else, it's for us. And we all laugh and clap and have a good old time (1intrv1, 700-719).

Within whole group audiences, we continue to see emphasis on self-directed activities, provisions made to support slower students so that opportunities for the gifted are not lost, and a collaborative classroom atmosphere that encourages student ownership of activities.

Transformations

As mentioned earlier, products that are transformational are usually recorded in student journals. Contracts for whole-class themes are also used periodically, and these contain other activities that ask students to transform or apply knowledge.

After reading one of the Cinderella stories, Titus wrote a sentence on the board: "Cinderella went to the ball." Students were instructed to take out their journals and embellish this sentence to turn it into something more meaningful.

Within a few minutes, a student walked over and shared her sentence with me. It read, "Cinderella went to the King's ball and She had a good time" (Observ, L. 258-260).

Other creative and open-ended products are used to follow-up whole group work. After reading the Monet book, Titus gave students four options to choose from:

1. Get out their learning log and write everything they know about Monet. Include a picture.
2. Write a five sentence poem about any Monet painting (paintings available in room).
3. Write a description of a Monet painting.
4. Write an acrostic poem and description of Monet (Matrix, 1/13/93).

Contracts for whole class themes contain further examples of transformations. These include:

1. Dramatize how the earth, sun, and moon interact.
2. Write a poem to the music of Holst's "The Planets" and/or DeBussy's "Clair de Lune."
3. Make a model of the moon's surface with clay and use rocks to punch craters in.
4. Study Van Gogh's "Starry Night." Create you own starry night painting (Theme Planning Form for Sun, Earth, and Moon).

By now it should be clearer to see how whole-group work is individualized in Titus' classroom. Many options for student products are given, and students choose what is meaningful to them. Options are open-ended and challenge students to use higher-level thinking skills. At times, students are excused from these whole group assignments to focus on other products they have chosen.

Differentiation of Product by Principle 2

Students are given individual assignments and mastery is expected

At times, students work on individual products that relate to a particular interest or talent. Students usually identify this interest themselves as a result of a whole group lesson, and Titus follows it up by providing time and resources.

During the brief visit to Titus' classroom earlier in the chapter, you were introduced to a little girl who, at the end of the school day, worked on poetry at her desk rather than joining other students at the sharing circle. She was illustrating her finished poem after doing two rough drafts, and explained to me that she was going to be a writer when she grew up. She also shared her poetry notebook with me. I asked Titus about this child and her poetry, and she elaborated.

She does have a poetry notebook that is unique. I did bind it on the school bookbinding machine. It's a series of just plain, blank, sheets of paper, that are spiral bound together and because Jessica loves poetry so much, I just gave her this notebook and told her it was for writing down poems that she thought of, as well as any other poems we had in the classroom that she might want to copy. Jessica does have a lot of writing difficulties, and I saw this as a way of motivating her. And she has kept that poetry folder going (1intrv2, L. 84-98).

Sometimes individual products are completed with adult assistance. "Linda did a webbing activity with one child in the back of the room (observ, L. 213-214)." The webbing activity was meaningful because it related to the story the student had read, and was composed with her own thoughts and words. An immediate audience gave feedback and suggestions, and helped the student refine her thoughts.

Not all of Titus' students jump at the opportunity to work on individual products, however. She feels this class is a more complex group, masking their

giftedness with emotional issues relating to family and environmental factors. In her frustration over this, Titus explains some of the products students from previous years have worked on.

I've got books on the counter that these kids will take and just thumb through for the pictures, but I've had kids in the past that would just take those in their independent reading time and do extra projects with, or projects that they would just substitute in place of something else on their contract (lintrv1, L. 387-394).

Despite their overall inability to excel at extended, independent products, Titus continues to encourage students by working through their interests. One such child is Jeremiah, a student Titus believes to be gifted, "...possibly in science; he sucks up any information on that" (lintrv1, L. 4240427). She explains this child's difficulties and how she works to motivate him through his interests.

Jeremiah has a lot of emotional, underlying problems...he's not E.D. but he's in a lot of turmoil and he goes for a lot of counseling...I have found working with Jeremiah that it is much better to entice. Throw things out there. "There is one thing you might be interested in," and then walk away. And I can do that with Jeremiah, and Jeremiah prefers to read. He's not one to get involved with experiments...yet. He likes to read about sharks, and then he's fascinated and likes to talk about sharks for days, and then you can't get his nose out of a book. So I try by gearing toward his personality...in knowing that he's a balker, and will shut down real quick. And his interests. I guess I'm coming at it from his interests..So I do make sure there are lots of books from the library and I'm constantly, "Look what I've found, J!" and set it there and walk away. And so I look for materials specifically for Jeremiah, and that's been my way of handling him, because you handle him like you're walking on eggshells 'cause he'll shut down real quick (lintrv1, L. 447-464).

Without knowing it, Titus is using many of the strategies identified in the literature for working with underachieving gifted students (Dowdall & Colangelo, 1982; Emerick, 1989; and Whitmore, 1986); . She gives Jeremiah space, yet gently nudges him in the

direction of his interests. Later, under the heading of affect, we will pick up on Jeremiah again.

Another potentially gifted student, Jonathan, presented a Civil War talk and demonstration to the class (p. 85). Jonathan's product was very real to him, for it followed his interest in the Civil War, an interest he shared with his absent father who lives in Michigan. Like Jeremiah, Jonathan is experiencing emotional difficulties. During one of my observations, I spoke to Jonathan, and was able to discern his general confusion and hints of underachievement.

Went over and spoke to Jonathan a bit. Said his interest in the Civil War came from his dad. Then he explained this person really wasn't his dad, it was his father, who lived in Michigan. He visits him in the summer, and saw him over Christmas. His dad lives at home with him. He calls him Daddy (his stepfather). Jonathan then explained he was working on a concentration game. Supposed to have 10 pairs, but he didn't feel like doing 10. Had papers enough for 7, and just wanted to complete these. I asked him what he like to read. He told me chapter books. The last one he read was, "Peter Pan" (observ, L. 461-476).

My initial response to Jon's reluctance to complete the concentration game was that perhaps it did not interest him, and an independent study would be more suitable. However, as the morning progressed, it became evident that Jon longed for a friend, and his attempts at socializing will be discussed more fully under "affect."

Jonathan did complete his Civil War independent study. Not all gifted students, however, have the emotional stamina to work independently during the primary years. Emotional concerns relating to family issues and adjustments take their toll, and sometimes these needs take precedence over expanded opportunities for cognitive growth. While Principle 2 deals with students working independently and

mastery is expected, one begins to notice that mastery is defined in relation to Titus' expectations for that individual student.

Differentiation of Product by Principle 3

Students are offered a choice of levels, and assignments are geared to help students work successfully at these levels

Most of the products completed by students fall under this category; small group work where students are given a choice of levels and activities with which to work. These products relate to the theme being studied, and are produced in front of the class or other classrooms.

Real Problems & Audiences

During one observation, students were getting ready to work in small groups on Reader's Theater plays. Before they dispersed in their groups to practice, Titus gave some final directions to all students.

...you might have to read your part 2-3 times--don't just read your script. Need to be prepared to present this to the kindergartners by Friday (observ, L. 383-386).

Students then dispersed to different areas of the room, with one group going into the hall to work. One by one they rotated to Titus, who gave them directions according to their needs. The first group to arrive needed much help, and Titus walked them through beginning steps.

Josh is absent, you may have to fill in his part. Five students worked with Titus in the sharing circle. Students were not organized to present...Is there a good fairy? a bad fairy? a king? O.K., you need to stand over here by the prince, you need to stand by the king...O.K., here's how it goes, folks. Someone will introduce you. You need to stand straight with feet together. Stand tall. Students then read, and

Titus helped with pronunciation. OK, Tom, I know this is the first time you are reading it. I want you take it to your seat when you're finished and practice it. You're doing a good job so far. Soooo, I like that part one, she exclaimed after a student read with expression (observ, L. 392-411).

Other groups met with her, but they needed much less help. The second group practiced, and quickly went through their lines and adjusted to the pointers Titus provided. During this time, the Hansel and Gretel group in the hallway re-entered the room, practicing expression together. "One little girl went on with her whole script. She had it memorized (observ, L. 479-482)!"

Another example of students choosing their groups to work on a product occurred during the artist unit. Students were creating "bulletin boards," murals done on lengths of bulletin board paper to be displayed in the room.

The rest of you have a choice of working on your contract items or working on your bulletin board. How many groups are there? Seven? Any questions? Students dismissed by groups. Got their materials and began working. Groups were assigned by painters (observ, L. 142-142-151).

Each bulletin board related to the painter the group had studied. As they worked they consulted resource and reference books on their artist, collaborated on what should go in the mural, and then on who was to do what for the finished product. At the end of the morning, each group presented their work to the class and explained why they chose to represent the items they did.

All three methods of differentiating "products" utilized real problems that were meaningful to students, were presented to audiences, and involved transformations. The different applications according to the different principles enabled students to

work as part of the class, a small group, or independently. According to Titus (and supported by my observations), the gifted students in this classroom did not all have the emotional stamina or stability to work for long periods of time independently, and preferred collaborating with others when a product needed to be completed. Titus made provisions for all of these students, and encouraged them to work in situations where they were comfortable. She did this by giving them choices, a strategy that will be examined in-depth in the next section on learning environment.

Learning Environment

Learning environment refers to the overall atmosphere of a classroom that becomes the context for the successful implementation of content, process, and product changes. This environment should facilitate students' motivation to learn, promote interest in pursuing topics, and establish the freedom to learn in a way that is meaningful to the student.

Several important themes emerged in this study regarding learning environment. These themes are important because not only are they illustrative of routines within themselves, but they are sub-components of other classroom routines. We might consider them macro routines, for they are at the heart of this teacher's philosophy and influence her pedagogical, curriculum, and professional decisions. These themes are student choice and interest, sharing time, and student evaluation. Because these themes act as macro-organizers, the differences noted among the three emergent principles will be slight, and should be viewed as the structures that support the differentiation of content, process, and product.

Student Choice and Interest

Student choice and interest permeates all classroom activities and routines. There are parameters to these choices, and these parameters are quickly defined to students during the first few weeks of school. As a theme, student choice is rooted in Titus' educational training, her own personal feelings about ownership, and a deeply rooted sense of who she is as a teacher and her role in the lives of her students.

I also believe in student choice. This is a whole language philosophy. The students have ownership of their learning.

Ownership is a very important concept I think in student learning. I don't like to be told what to do. I don't like to be told what to do in my classroom. I like the right to make it mine, and own it; therefore I don't feel I have the right to imply (sic) learning on children in that manner. I let children choose...there's a lot of choice built into my classroom management techniques (1intrv2, L. 122-135).

Student choice is closely aligned with student interests, and is one of the main building blocks of differentiation for Titus.

We can get learning by demanding it, or we can get learning by offering it and inviting it. And I think choices help invite learning. It's really an important part of my philosophy. Student interests, and giving them the choices, because I think that's the way we develop, and get the kind of children I am trying to create. Not create, but trying to help develop (1intrv4, L. 972-981).

Titus' use of student choice goes beyond a practical solution to providing differentiation to a diverse student population. It is rooted in her mission as a teacher; in the fundamental goals she strives to accomplish with her students.

What I really think is the most important thing I can give my students is an attitude that learning is fun; that they are an important individual and have a contribution to make. I think that the way to show children that they have a contribution to make, that they are an individual, and that they have some worth is by giving them some choices. The wise person is someone who knows how to make the right decisions. The wise person is someone who knows themselves, and knows their own strengths, and their own weaknesses, and can work off of those strengths and weaknesses. I think the way you get to know yourself is by being given choices, and being forced to make decisions, being given responsibilities. That's where choices come through. You have the choice to do these things, now take the responsibility for the decision making, make it, and follow through on it. Discover whether it's a part of your personality or not. So I think that the interests (and choices) are extremely important, because it helps a child develop who they are, and understand who they are. I think that's one of the big problems adults are having today, is that they didn't find out who they were as a

person. At the same time, the emotions of the child come into play here, too. It's all an individual thing. I DON'T believe, I hear teachers and it just makes me cringe when they say, "I'll straighten that child out." That's not our job, that's not what I'm here for. I'm here to meet each individual as a human being and to guide them if they have some mis-guided values or to guide their thinking or guide their learning, but I'm not here to change their personality and who they are. I'm here to help them find out who they are and help them be the best they can be and know that who they are is worthwhile (1intrv4, L. 851-898).

For Titus, choices define who we are as individuals. By making choices, she believes students learn to take responsibility for their own learning while also gaining a better understanding of their likes and dislikes, their strengths and their weaknesses. It is important to her to offer her students choices so they can learn more about themselves. These choices include the types of assignments they want to complete on a given contract to meet their learning styles, the types of books they want to read to accommodate interests, and who they want to work with to address social needs. There is never the choice to do "nothing," choices are defined for students, and they make an informed decision. Under the section on affective development, the influence of Titus' philosophy and biography will be examined as they relate to student choice.

Sharing Time

Sharing time represents a second macro-routine that occurs throughout the day when Titus shares with students and students share with their peers. It is interlaced with other routines, such as language, reading, math, and opening exercises. While Titus attributes this set of routines to her graduate studies, one may speculate that her musical background and love of performing may feed its roots in classroom life.

Sharing time is a direct result of my graduate program. I was taught that there are four important elements to a holistic classroom. One is holistic language arts. Let's narrow it down. One is that the children have opportunities to read in reading groups, and have choices in their reading groups. Another element is the independent reading time, which is WEB time, in other words, they have time every day to choose books and read for pleasure, and not have to worry about anything but the pleasure. Another element is writing. And then the fourth element was a time for sharing. Now that sharing time can be done by the teacher, or it can be done by the students. So I use that sharing time as a time to share my knowledge and what I know, to share a piece of literature and leave the children to certain understandings that I'm hoping they'll acquire. Or, we can use the time for children to share things they know and knowledge they have. I'm not the only teacher in the classroom. I firmly believe that the children should also have opportunities to share and to teach. I learn from them every year...I think children ought to have opportunities to teach as well. So the sharing time can be used as a lesson time where I share what I know and guide children's learning, or it can be a time for children to share something they've written and are very proud of, or a project that they have accomplished, or in the case of Jonathan, some knowledge that he had that he thought others might need as well (lintrv4, L. 341-393).

Sharing time illustrates the sense of collaboration that exists in the classroom. The learning environment encourages two-way communication, and students know that their ideas and thoughts are an integral part of the learning environment. In addition, students learn the importance of listening to one another and their teacher. Sharing time leads to student evaluation, another macro routine within the learning environment that consists of several smaller routines.

Evaluation Philosophy

At times, the evaluation routines Titus weaves throughout the subject area routines appear impromptu, but when examined more closely, are actually a reflection of experience, education, and her philosophical beliefs about teaching.

My cues in differentiation come from the child themselves, not from the label that the child wears. No two children are viewed the same way in my class, even the gifted ones are viewed differently from each other because they are unique. I do not think of children in terms of "O" students, "G" students, "S," "N," or "U" students. I think of students in terms of who has reached this objective, and who is still working on it. Who has reached this objective and is ready to move on; who has not reached this objective and needs to be remediated. So I think of children in terms of...each learning objective that comes along, not in terms of a grouping (1intrv2, 59-76)

This evaluation system results in a high level of responsiveness to student needs.

Titus reads her students carefully. She makes inferences about their behavior rather than reacting to them, and adjusts her instructions to them accordingly. The environment is accepting rather than judgmental. In viewing learning environment through the filters of the literature in gifted education, connections that link student choice and interest, sharing, and evaluation become apparent; establishing the creation of a learning environment that celebrates the individual. Characteristics of differentiation from the literature include student choice in assignment, complexity rather than simplicity, student centeredness, encouragement of divergent thinking, responsiveness, and flexible grouping arrangements (Barbe and Renzulli, 1975; Clark, 1992; and Maker, 1982).

Differentiation of Learning Environment by Principle 1
Students receive the same assignment but are evaluated differently

Principle 1, where students receive the same assignment but are evaluated differently, works because of the strength of Titus' learning environment. Here,

complexity, responsiveness, the encouragement of divergent thinking, and a student centered atmosphere prevail.

Complexity

Complexity in the learning environment refers to the types of assignments given to students and the physical use of space. Titus' room meets both attributes in that higher-level thinking skills and abstract themes are a given, and the physical environment is a visual kaleidoscope of charts, materials, and displays of student work. An outstanding example of both is Titus' opening routine, that integrates basic skills and problem-solving strategies with leadership tasks. (Because this routine was cited in "Titus' Day," p. 61, only a portion will appear here.)

I want someone to tell me how many days we have been in school so far this year? J.? 79. Thank-you, you may add that to the tape. O.K., M., will you take this to the office? While she's doing that, we need someone to take care of the weather chart...and the date on the chalkboard...need someone to do that for us...continued with calendar activity. Stressed math facts. J. explained his plan. Asked students if J. had a good plan...Titus had students explore all the ways they could use the calendar to figure out how many days they were in school (observe, L. 48-90).

During this routine, Titus orchestrated students as they began, implemented, and then evaluated a series of "housekeeping" chores. Between six and seven students were busy at the different tasks, and as one got started Titus drew the class' attention to another one. She continued to loop through all the stages with all the students, and the students knew this, for they stayed at their station until she finished the sequence with them. Like a symphony in its last few measures, one by one the students returned to their seats.

Complexity of student assignments to include abstractions and transformations was viewed earlier with regard to content, process, and product. It was noted then that themes included "Freedom," "Courage," "Artists," and "Space," and that open-ended assignments were the rule rather than the exception. Books and materials on various reading levels were made available to students as they worked, and Titus encouraged gifted students to make use of these. In addition, students could choose the types of assignments and groupings they wanted to correspond to these materials, and time was built into the day through sharing time to share their products. These multiple layers of choices give further evidence of complexity in the learning environment.

Responsiveness

Titus' expertise shines in her ability to read her students behavior, and adjust her instruction accordingly. She listens to their voices and takes them seriously. At times, they chime in as a group and make a silly request, but rather than proclaiming "there's not enough time for that now," she honors their thoughts. During a sharing time that functioned as a review of artists previously studied, students wanted to hear a vignette again.

I am thinking of a painter who got in trouble because people paid him to paint their portrait, and he did not paint them all as important?
Rembrandt, right! Students wanted to hear story again. Asked Titus to sit in the chair and tell the story again. That's a good story! She did!
(observ, L. 111-119)

With a hearty laugh at their clamoring to hear a "good" story again, Titus turned her chair around and re-enacted the scene. Students moved from a sitting to a kneeling

position, and laughed and clapped as she performed for them. Her responsiveness let them know that two-way communication is indeed valued in this classroom.

At other times, Titus' responsiveness can be seen as her ability to anticipate students' needs, and again adjust instruction accordingly. This ties in with her belief that learning should be meaningful to students, and that it is her responsibility to create an environment in which students will care about the learning that is taking place. Upon students' return to school after the first snow of the winter, Titus included a poem on snow during her language block.

At 9:45, Titus told students to join her at the sharing circle. Students read a poem with the teacher, "First Snow." Titus quickly related the poem to this week-ends' sprinkle of snow (observ, L. 262-266).

Titus opened the doors to learning by capitalizing on students' enthusiasm. She anticipated this because she thinks about how students think, and a meaningful language lesson ensued.

Responsiveness to whole-group student needs often results from Titus' knowledge of learning theory and child development, as well as experience. She anticipates because she knows. There are many examples in her room.

I turned around to look at the clock; it's now 2:50, and I note that the hours of the clock have big yellow dots adhered to them to help students learn to tell time (1ob3, L. 43-47).

Perhaps not all students need these yellow dots, and maybe not all of them want to discuss the snowfall or hear the story again. But by making these accommodations in whole-group instruction, Titus' message that "you are important to me" shines through. Curriculum flows from the needs and interests of students. When she refines this

message to meet individual student needs, they take her seriously. They know she cares.

Encouragement of Divergent Thinking

As noted earlier under "product," assignments under principle 1 are designed to be open-ended to meet a diversity of student needs. Divergent thinking is thus apparent in many whole-group follow-up assignments. An example of divergent thinking occurred during the morning routine when Titus asked students to explore all the ways they could use the calendar to figure out how many days they were in school. Whole-group contracts also make provisions for divergent thinking. Examples include, " Make a picture dictionary of space words," and "Read Sunshine Makes the Seasons and brainstorm words we'd no longer need if there was no more sun" (Theme Planning Form). Divergent thinking activities tap into students' knowledge to help them review and refine their thoughts, contributing to meaningful learning while expanding their thinking.

Student Centered

Titus' belief that work should be meaningful to students necessitates that she focus on their ideas and interests as one part of the curriculum. This is done largely through student choice and structured sharing times, and is supported by her knowledge of child development and use of collaborative learning techniques. At times, she finds her room gets a bit noisy as a result of these elements.

T And what I wasn't pleased at, that they get very loud. And of course, there's a lot of us. Generally, when I go around in frustration and wonder who is my culprit, I can't find them! Because they are talking about things that are good!

P They're on task!

T Yeah! And I'm a talker, and I want them talking! Because talking is an important part of learning, so it's like, "Oh gosh, I'm beating a dead horse!" I've created this monster, and now I'm trying to suppress it! It doesn't quite make sense all the time! (1intrv1, L. 597-618).

This developmental model of instruction necessitates the use of anecdotal records and portfolios for evaluation, which emphasize individual student growth over classroom gains. These strategies provide an overall structure to create and support a student-centered atmosphere.

Differentiation of Learning Environment by Principle 2 *Students are given individual assignments and mastery is expected*

Despite Titus' dislike for Principle 2 because she feels this singles students out, she is accepting of student needs and works to develop their independence. Titus' beliefs for creating an environment that allows for individualization are rooted in her commitment to developing each individual's potential. To establish a learning environment that allows individuals to progress at their own rates, we see the elements of student choice (which encompasses high mobility and independence) and responsiveness fostered in the classroom.

Student Choice and Interest

Opportunities for student choice and interests are either planned or unplanned. Planned choices are worked into daily contracts, the weekly spelling words chosen by students, the option of choosing from a selection of follow-up assignments, and choosing the types of materials and students to work with. Unplanned choices stem

from student interests and relate to Titus' responsiveness to individual student interests and needs.

During one interview, I asked Titus if two themes I was noticing in her classroom, individualizing through student interests and designing instruction to meet students on an emotional level, were related. She responded affirmatively, and then elaborated.

I think you're right. I think these are really important to me, But I think you are thinking a little too narrowly. I think they are broader than that. Yes, student interests are important to me. But they are important to me because they are a TOOL for what I am trying to accomplish. What I really think is the most important thing I can give my students is an attitude that learning is fun; that they are an important individual and have a contribution to make...I really believe everybody has a gift in a certain area, and I try to help all of my students find their gifts (1intrv4, L. 844-851; 925-928).

Other than her methods of differentiating spelling and math, student choice and interests are the primary mechanisms Titus uses to expand learning opportunities for individual gifted students. This may be a haphazard approach to individualizing instruction. Titus appears to be successful using this approach because of her commitment to develop the potential of every student. She keeps anecdotal records of what students are choosing to do, makes time to confer with them individually to guide them toward accepting more challenging work, and is in close contact with their parents.

Responsiveness

The learning environment of student choice and interests, which is shaped by Titus' responsiveness to help individual students find themselves, is deeply rooted in

affective motives. She has created an atmosphere where students know that their thoughts will be respected, and she has established routines within her classroom that allow individuals to pursue their interests without feeling ostracized by their peers. These characteristics were demonstrated with Jonathan, a gifted student struggling through emotional turmoil, who expressed an interest in pursuing information on the Civil War. Students in Titus' room are expected to make decisions and are encouraged to carve their own space within the group.

Titus keeps strict parameters around this responsive environment, however, to further protect the children. Jonathan was not allowed to disrupt the classroom routine to share his information about the Civil War. Instead, his presentation became part of a lesson already in progress, and he was encouraged because his information would help his classmates understand this era.

And I said, "Well Jonathan, next week we're going to be reading a story that is set in the Confederacy. How about if you talk about the Confederacy at that time?" (1intrv4, L. 375-379).

Through the use of student choice and interests and a responsive learning environment, Titus provides enough structure for students to feel secure, but not so not enough to limit or stifle creative responses. Students are expected to take ownership of their talents and interests and are supported as they explore these. When they do not, Titus confers with them individually. If several children are having difficulty, she will do a mini-lesson on topics such as "How to be a Good Second Grader," and review her expectations while giving students an opportunity to practice decision making under a more structured framework.

Differentiation of Learning Environment by Principle 3

Students are offered a choice of levels, and assignments are geared to help students work successfully at these levels

Learning environment modifications that enable students to choose their levels and subsequent assignments continue to emphasize choices and interests and responsiveness, as well as flexible grouping arrangements and a student centered atmosphere. These attributes are all present in the reading routines used during the morning, whereby students choose a book relating to the theme from which they want to work, and then choose activities from this contract.

OK, here's how it goes, folks. Someone will introduce you. You need to stand straight with feet together. Stand tall. Students then read, and Titus helped with pronunciation. OK, T., I know this is the first time you are reading it. I want you to take it to your seat when you're finished and practice it. You're doing a good job so far. Another group, Hansel and Gretel, was practicing in the hallway.

Titus was working short-handed today. Explained that her college student had canceled, and the reading teacher was at a meeting. "It's hard to do 50 things today!" Despite this, business was conducted as usual. She checked on the group in the hallway practicing, then scolded the group at the sink area because they were off task. "You're interrupting my teaching! We don't have time to waste!" Students pulled out away from the narrow corner where they were spread apart a bit and could be seen more visibly. Titus went back to the sharing circle, and a second Reader's Theater group joined and practiced with her. These students seemed well rehearsed and needed less direction. Seven students worked at their desks on their contracts.

Flexible grouping arrangements and a student-centered atmosphere can be seen throughout the morning as students work on their contracts independently. The scenario with Jonathan regarding the concentration game was followed by an observation of him choosing Jeremiah as a partner to play this game. It is interesting

to note they sought each other out; two potentially gifted seven-year-olds who are able to read several years above grade level, yet are unable to transform this knowledge into finished products.

Another example of flexible grouping occurred during math. Students worked on place value with manipulatives, but were also given materials to use with more abstract thinking. Titus explained her objective for this activity, and how she will use her knowledge to determine possible grouping arrangements.

So my whole objective too, then, will be a chance to wander around and informally assess the other half of the class on place value. And then with that, next week's lessons will be working on bringing out those kids with grouping...the lessons will remain the same, but the groupings will change...most of them will be able to choose (partners), but I'll move right on in, and just happen to end up with N. left over, and needing a partner, and "Gosh, N., I'll play with you!"...I try not to make it too obvious, because nobody likes to be the dummy, you know (1intrv3, L. 465-489)?

Flexible grouping is used to meet students needs. Titus keeps a close eye on these groupings, making efforts to pair students so that all benefit. Students needing much assistance work with her, and she uses this time to model skills she believes the student is ready to attain.

Learning environment encompassed several macro themes in addition to traits listed in the literature as beneficial to the implementation of modifications for content, process, and product. These were student choice, sharing time, and student evaluation procedures. All were meshed into the reading, language, math, and content areas, in addition to general management and opening routines to create a collaborative classroom atmosphere that celebrates the individual child. Students are encouraged to

explore their interests and make choices to learn more about themselves and to take responsibility for their learning. They are further encouraged to share to develop listening and speaking skills as well as to contribute to the class' knowledge base. The use of a developmental evaluation system provides an accepting rather than judgmental atmosphere. Because of these macro-routines, the learning environment was complex, student centered, and responsive to students' needs and interests. These macro routines were built upon a set of beliefs that had student growth at its heart. Titus' goal is to help students make sense of themselves and their world, and she has created an intricate operating system to help her accomplish this. As we explore affect in the next section, we will uncover the roots of this operating system.

Affect

Affect is the heartbeat of Titus' classroom. It is rooted in her beliefs as a teacher, which are then portrayed in classroom routines and decisions about curriculum and instructional practices. If affect had a shape, it would be a mesh bag into which Titus places content, process, product, and learning environment. The bag supports these items, but these items give form to affect while allowing external and internal forces pass through. Titus carries the bag with her, at times loosening the strings to accommodate students' needs, at times closing the strings to keep the parameters stable. Her personal philosophy colors the bag. This has both positive and negative consequences for gifted learners. At times her rich philosophy may allow disadvantaged gifted students to become identified; at other times, her philosophy appears to thwart the growth of those already identified. I will begin the exploration of the bag by describing its color (personal philosophy), and then examining its contents (relationship to other areas of differentiation) as its force is applied to the three principles of differentiation.

Personal Philosophy

In her philosophy of teaching, Titus gives testament to the worth of each individual. As a teacher, her mission is to take each child and to develop his or her gifts to their fullest potential. She does this by believing in her students; and for those who do not yet believe in themselves, she provides opportunities and choices in which they will begin to experience the success that leads to future success.

I work hard at presenting an environment in which my students can find courage. It takes courage to present one's best, for there are no guarantees that our best will be successful. I try to celebrate that courage--the academic risk--rather than the outcome. It is this risk that leads to learning...I expect my students to take responsibility for their learning. "What do you want to accomplish?" is my frequent question. This simple question places the responsibility for learning squarely in the student's lap while also saying, "I trust you to learn. I respect your decisions"...I believe I am not the sole source of learning, the only teacher in the classroom. Each child comes to me with a wealth of knowledge all their own. They, too, are valuable teachers, and I am also a learner...And perhaps most important of all, I truly believe that all children can learn. Unfortunately, all children do not believe this about themselves. That is when the toughest teaching we do occurs. It takes patience and confidence to lead these children to the courage that will allow them to stretch, to take risks, to learn. Like John Dewey, I do not believe school should be an imposition upon children. We are there for the children and the needs they have today. We must meet our students where they are, not insist they meet us where we are. It is not my job "to prepare students for life." It is my job to guide students' growth; their life is now (Philosophy of Teaching, Appendix A).

This philosophy, which centers on the worth of each individual, has its roots in her biographical past.

I can tell you that my thinking, the importance of the individual, came directly from my father. I was raised very much, and told over and over, you must remember who you are. You must find out who you are, and remember who you are. And my dad used to talk to us a lot about integrity, and the only person we had to answer to was ourself (sic.). Having the courage to stand by our own integrity. And he used to talk to us about our strengths, and about our weaknesses, and I really think that's been a very influential part of my life. I try to impart it on my own two children at home. It helps you be more stable if you know who you are, if you know why certain things bother you, why you can't handle certain situations as well as others. You will be able to grow in that direction and handle them. So, this is what I'm doing through student interests and choices and emotional levels and all of this that we're talking about. I'm trying to help my children find out who they are so that they can become lifelong learners and responsible citizens. I think you do that through choice (1intrv4, L. 932-960).

While Titus stresses the importance of meeting the needs of students on an individual level, she wrestles with another belief: equality within the classroom. At times she espouses the needs of the individuals, yet at other times she insists that all students be given equal opportunities. Her response to this paradox reveals biographical and experiential roots.

I'm responding to the letter you wrote outlining several paradoxes that you've noticed within my classroom. Two of them do not give me any trouble at all. I don't find them paradoxes, personally. One, I do.

Let me talk about the two first that don't bother me, and I want to talk about them in reverse order. The one I want to speak to first is the paradox that says, "Children should be treated the same, but individual talent should be nurtured." In your comments you refer to the sign I have above my door that says, "Our similarities make us equal, our differences make us unique." To me, these two go hand in hand, and I don't see them as a problem. I believe firmly that every child, especially in the primary grades, which is where I am dealing, every child has the right to the same opportunities. I have seen too often in my teaching, children who were not labeled gifted be able to do very gifted things if given the opportunity. I do not think that in second grade we can isolate children as gifted and others as non-gifted. It is too fuzzy an area and too early an age to label these children. Yet, if I were to teach my gifted children different lessons than I would the other children in the classroom, I would be denying children the opportunities and maybe some potentially gifted children the opportunity to expand and grow. I think it's extremely important that we give all children a fair and same opportunity. Life becomes unfair soon enough. Primary school is not the place to start.

My own belief in this goes back to myself as a student and child in school. I know I probably would not be labeled gifted because I was slow learning. Let me change that. I was a slow worker. I understood things, but it might have taken me till the second day. But once I understood it, I could perform as well as anybody else in the classroom. I would have resented, and did resent, when children were pulled aside and given information or opportunities to learn that I was not given, when in my heart, I knew that I could handle the situation, too, and the learning also. In college, I think of a sorority sister I had, who was a math major. Brilliant, never studied; was bored through college because

the math major was not challenging enough. I now compare my life and hers. She and I are still in contact. I have become, perhaps, I feel more successful with what I have done with my life in a learning sense, than she has been with the way she used hers. I have become a teacher who has received, fortunately, many accolades for the work I have done in my classroom. She, on the other hand, is a housewife, which I don't mean to put down at all, it's just that she is not using the great mind that she had, and she's probably one of the most gifted people I know. To me, the mental giftedness, is only a small fraction of what's going to make the success of a person later on. And I am not interested in dealing with giftedness so much as I am in dealing with motivation, because that's what's going to make a person successful, ultimately.

So in my classroom, I think it's very important that I give every child an opportunity that is equal to everyone else's. Now when I come to planning my units and my lessons, I try to teach to the top third of my class when I teach my whole class, whole lessons. Then what I do, is through the reading specialist and classroom volunteers, peer tutoring and lots of other devices, move in and support those kids who need the support. Again, assessment becomes an individual thing. I expect my top students to master certain concepts. And I expect certain thinking levels from those children. Other children in the classroom are exposed to the very same lessons, but I may just expect from them enrichment and exposure to a certain topic. This is fair, I think, because it gives those children who catch on the same opportunity, or an opportunity to discover a talent they didn't know they had, and that I didn't know they had. So I really think it's important that when I teach the children the same way, what I am really doing is giving them the same opportunities. Now I always, in my own personal, self-evaluation of my lessons, check and make sure, "Am I meeting the needs of my top students as well?" That's an important part of self-evaluation and evaluation of a unit. Within these equal opportunities, then, I think it is my role then to help each child discover their talents and I guess I've kind of touched on that, and you're getting a feel, hopefully, of what I mean.

Another paradox, which I think goes hand in hand with this, is the one where you say, "I work with my class as a whole, but I do this to allow individuals to prosper." That comes again to the fact that I work with my class as a whole because I want them to have the same opportunities, but then I will move in and work with individuals who need support, like through the Chapter I reading program, or a child who is showing an interest studying the ocean, or a child who is interested in sharks. Everyone got the same shark lesson, but someone

with an interest in it I will steer towards other literature or maybe spend an extra day with the topic so I can go into it more in depth because of a particular child. But I am not going to take that opportunity and isolate it. **I DO NOT BELIEVE THAT GIFTED EDUCATION IN THE PRIMARY GRADES SHOULD BE ELITIST.** I do not believe that they should be treated, receive lessons that no one else receives at this point, because, as I have said earlier, it is still too young to identify beyond a shadow of a doubt. We have kids who are being labeled as gifted, and what they are kids who have come from nurturing and enriched homes. And they are not necessarily gifted kids. And in 6th or 7th grade we are finding out that they are not gifted. But yet, they've been labeled that way in the primary grades. On the other hand, we have children who are not coming from enriched or nurtured homes who in the early grades are learning how to go to school, and they're trying to catch up with the amount of literature hours that they have been exposed to. Once they play that catch up game, some of those kids take off and become very successful.

My son's in high school and whenever the honor roll list comes home, I always look at it to see who I have taught. Now, grades, necessarily, are not always an indication of learning, but, interestingly enough, some of the children I had in second grade who were real strugglers, are now on the honor roll. I think of one little girl, Jennifer. When I went to the high school awards banquet last year, or Awards Ceremony last year, Jennifer received several awards, and one was in English. I never would have predicted that of Jennifer in second grade. Therefore, I think it's extremely important that all children in the early grades be given those opportunities the same, because I don't think we can label them beyond the shadow of a doubt. I think, too, if I haven't mentioned it on this tape, I may have mentioned it to you earlier, but for the sake of not omitting it, let me mention to you about a little boy I had last year, Jeremy. Jeremy was a chapter one student, he'd been in a D-1 class. He went to kindergarten and then he went to a D-1 first grade, and then to a regular first grade, and then he came to me in second grade. I also had a little girl named Amber who was gifted in math. Now, I had devised some learning centers and some math lessons for Amber, particularly. And they involved logic. Amber had a real talent with logic and reasoning skills. And they were designed with Amber in mind. But, I put them through the lessons and the centers for the whole class. Amber took right to them, and was able to solve the logic problems. Jeremy saw Amber solve the logic problems, and became interested. He took the same situation, and within five minutes solved the problem himself. Took another problem and ten minutes later solved it. They were problems that were supposed to be for gifted

people. They're problems that I have not been able to solve, believe it or not. And Jeremy, just watching Amber, did not know that he was supposed to be able to that, technically, by his label. Had I just offered those opportunities to Amber, we would never have discovered that Jeremy has a love of logic and reasoning puzzles as well. And that he has a very good talent in that department, but that he is still a struggling student. Those types of experiences I have seen over and over in my experience. I have taught first grade and second grade. And it just reiterates to me the importance of the opportunities, the learning opportunities, we put forth to the students. They have got to be the same. Because we just can't isolate our gifted kids yet. So I don't see these as paradoxes. To me, when I'm teaching the class as a whole, I'm offering everybody the opportunity to learn. Whether they do that is different. The assessment comes through differently. I expect mastery of some kids, others I am just offering an exposure to. So, treating them the same but helping them find...by treating them the same, I feel that's the best way that I can help them find their individual talents. So those two to me are not a paradox. I hope this makes sense to you so you can kind of understand how I feel about those subjects (1intrv5., L. 6-281).

Titus' philosophical belief that all children should be given equal opportunities is rooted in her own school experiences as a child, and reinforced by her experiences as a teacher. She found it unfair for other children to be pulled out of the classroom as a child, and now seeks to ensure that all children are given similar opportunities. This raises concerns about how actual research in education truly impacts upon teachers decision-making processes.

A second philosophical paradox for Titus involves the use of "labels." At times she dislikes the term "gifted education" because it labels children as different.

My problem, I think, comes from the fact that I have trouble with the term "gifted education" because in my mind that, um... implies a division amongst the student body. And I don't think differentiation should divide children into categories. I think differentiation should mean different applications but that the children remain a unit. I don't know that is philosophically wrong because gifted education always

says that we must remember that children are children as well as being gifted (1intrv2, L. 19-33).

Yet, at another time she explained that it was the use of labels that helped her son progress successfully in school.

I don't like labeling. Yet at the same time, I recognize that a label can be a real plus given our education system. And I come back to my own son, who was labeled very early, he was labeled in kindergarten, as learning disabled, gifted learning disabled, and wearing those two labels saved him a lot of heartache in school. That LD label really signaled to people, and to teachers, that they needed to back off in certain areas, or teach differently. They needed to modify their expectations in certain areas, and individualize them for my son. But at the same time, they had to recognize the giftedness of him as well. And not let one aspect overshadow the other. And they did. Those special ed. labels did save him a lot of pain...what was I saying, oh yeah, about the grouping...So I'm fluctuating back and forth on that sometimes. But I keep hanging in that with my ideal that everybody deserves the right opportunity. Because again, there was that little girl Latrisse that you will recall in my class from this year, the little tiny one. She will probably be held back in second grade another year, but given Latrisse's past...Latrisse walked back into my classroom this year not knowing letters of the alphabet, not knowing consonant sounds, and with maybe five sight words in her vocabulary. Latrisse has had a first grade year. I have not changed one thing for Latrisse. I have offered her every opportunity that the other kids have had, and then I have moved in and supported. Put her books on tape so that she could listen to them, so that she'd hear the repetition, because she needed to hear the words. Had her work, with college girls to support, but the lessons and reading contracts, were reading contracts offered to groups. And she was never isolated and never put on a program, for lack of a better word, a reading program that was different from other kids. She was always offered the same opportunity, but then we moved in and we supported...much, much support. I am thrilled with what that child has accomplished. She is reading, probably on a first grade reader level at this point. The reason we're thinking; Mr. M. (principal) and Mrs. J. (Asst. Principal) and I, are thinking of holding her back is because we're not sure, given our third grade situation, that there's a teacher that can scoop down to where she is, or open up their teaching broadly enough to accommodate her needs at this point. She's made such great strides. If we do hold her back in second grade, I'm going to have her again. But SHE has come by leaps and bounds, and at the same time

sees herself as a good student and feels very confident in what she can do. I don't think she would have that self-confidence and like learning and see herself as a successful student if I had kept isolating and made her do things that were different from the other second graders. I think she came along because she saw herself as part of the group and having the same opportunity. By giving her the same opportunities as the others, I was saying to her, "I believe you can do this." And I think that message is what's so loud and clear (1intrv5., L. 380-469).

This response raises several concerns for the field of gifted education. The conflicting loyalties a regular classroom teacher feels toward meeting the needs of sub-populations of students in her classroom causes her to seek generalizations that will allow her to organize instruction in an effective manner for all students. Rather than seeking these generalizations from the research base for these subpopulations, this teacher uses examples from her teaching career. Thus, what enabled an at-risk student to succeed in her room becomes a generalization for organizing instruction for all students, including the gifted. Sometimes, these generalizations may help to provide opportunities for students who otherwise may not have been recognized, but at other times, the needs of gifted students may go unaddressed under the guise of equality of opportunity.

The affective qualities that Titus breathes into her students, curriculum, and instructional decisions are based upon helping each child discover their uniqueness. Under the literature of gifted education, these characteristics are called developing values and releasing potential, encouraging the development of a positive self-concept, and developing emotional growth, leadership skills and global identity. While these areas pertain to the education of all students, the issue of social responsibility and values are especially important to gifted education (Shore, 1991). We will trace these

characteristics as they occurred under content, process, product, and learning environment as we examine affect practiced among the three emergent principles of differentiation.

Differentiation of Affect by Principle I
Students receive the same assignment but are evaluated differently

Principle 1 deals with how Titus provides an overall framework to her instruction and then makes accommodations within that framework by adjusting her expectations for individual students. Affect plays a key role under this principle, for in order to determine curriculum and adjust expectations, she needs to know her students. And she does.

In choosing content for the class, Titus strives to make emotional connections for learning. She does this by choosing themes that target the social needs of her students and herself (refer to p. 78). These include developing students personal values under the theme of "How to be a good second grader," in which she explores the value of courage to do one's best. As individual social needs surface during the course of the year, she includes the theme of "friendship" to help them learn the value of getting along with one another. Finally, Titus' personal values are exposed as she includes content on the elderly, an emotional concern of her own. Titus relates how former students think about her curriculum:

I see it in third grade when they come back and they spend a lot...they hang around the room a lot...and I know that they're missing something..."Oh, you're doing such and such." "Oh, you're studying such and such." And it's kind of a longing. And I know that it's connecting emotionally at least with them (1intrv1, L. 1015-1026).

These emotional connections are based on Titus' value system, and through this system she helps students clarify their own values. The vehicles for this fall under the realm of process skills.

In conjunction with the presentation of content that is value-laden, Titus utilizes open-ended questions and assignments in addition to self-directed learning activities and student choice to allow students the freedom to explore their own thoughts and values as they relate to content. These strategies further enable students to develop values and release potential, as well as developing leadership skills and positive self-concepts. Enabling students to release this potential is one of Titus' goals.

...to me, the most important thing that I can do for these kids is show them that they can learn. And I think you do that through interests, and through success. Being successful. So I work very hard with each one to show them that they have a talent. That they all have talents...And we help each child find what they are strong at (1intrv1, L. 1038-1052).

In addition, the open-endedness of assignments and questions allows all students to succeed, even those who do not yet believe in themselves. Titus uses a system of anecdotal records to monitor student growth to help provide continual feedback in the areas they are working to master.

T I tend to use a lot of anecdotal records, and I write those when they come to me for like their contract checks. And I've got them right there and I can conference with them quickly! Briefly! And I can make an anecdotal record of where we are...Hold on, let me get you a copy of several things. I'm not sure I pulled a good example, but we'll take J. This is a copy of my anecdotal notes to myself on some of his progress with reading...some of it involves writing, too.

He completed his contract. Now this was at the beginning of the year. He wrote three questions out of five. Then I got two statements. Uh, he's very confused about questions and statements at that point. Now, later on I got, down here, I can tell by my own handwriting that he's

correctly giving me five questions. He's still omitting some capital letters on some of his questions, but I'm getting my five questions. So I've got my anecdotal records to kind of keep me going. What they did well, ABC order is noted, um, you can graph, and

P And so do you use these for groupings or sort of...

T Yup, yup...and a lot of individualized stuff. Because they come to me with their work, and I've got them at that moment.

P Right

T And I can look at it myself and get it corrected immediately, or send them back to fix it, or fix it and now go compare it to somebody else's, and all the elements are there, and there's a lot of this impromptu, teachable moment kind of stuff (1intrv1., L. 266-330).

This informal assessment is in line with Titus' belief that most of the work students do is for practice. In the section on student products, Titus explained the connection between her musical background and her belief that most of what we do to accomplish a task or goal involves practice, and that our efforts during practice time need not be judged by others on a regular basis.

This informal feedback through questioning and sharing with the teacher leads to future success. To enable students to succeed, Titus believes in a learning environment that allows students to feel safe when they practice.

Above all, I want my children to walk out of my classroom with an "I can" attitude. I want them to feel that this is a safe classroom and a place where they are appreciated for who they are. I think you do that by respecting the individual, and respecting the individual means giving them the power to make decisions for themselves (1intrv4, L. 1158-1166).

This "safeness" helps develop their emotional growth as they trust and share their work with teachers, parents, and peers. Leadership skills emerge as students share their work with others, and success leads to a healthy enhancement of self-concept.

For students to feel safe, the learning environment needs to be one of nurturance for every student.

Within this learning environment, a highly articulated sharing routine abounds to help develop leadership skills. In addition, student choices help students to define themselves as individuals and identify their values as they learn to make choices for themselves. Flexible grouping further allows students to understand who they are in relation to their peers in both large and small group situations. These aspects of the learning environment continue to reflect Titus' affective belief system that places students' self-knowledge as a fundamental cornerstone of teaching.

The affective strategies under this principle demonstrate how within the whole group Titus is able to differentiate instruction that will allow the gifted student to seek his/her own potential, develop a positive self-concept and emotional growth, practice leadership skills, and develop values and release potential. These students are not necessarily treated differently from other students; their potential, however, is allowed to grow and thrive under these circumstances.

Differentiation of Affect by Principle 2

Students are given individual assignments and mastery is expected

Principle 2 takes us to the opposite shore where individual assignments are given, and mastery is expected. Affect under this principle, which deals with the individual needs of students, occurred most lucidly in the story of Jonathan and Jeremiah. Under the section of product, it was learned that these are two highly capable boys who exhibited emotional difficulties as a result of family issues. Neither

possessed the emotional stamina to complete an in-depth, independent study. And Titus did not pressure them to do so. Instead, they were provided opportunities to develop friendships and support and to achieve "emotional connections" with others with the hope that as they grew stronger they would tackle more in-depth work on their own. Titus met their cognitive and emotional needs by working through their interests and carefully placing ideas within their grasp rather than "telling" them what to do. Whitmore (in Maker, 1982, p. 206-207), lists curricular modifications for underachieving gifted students similar to these:

1. Gain understanding and empathy for the highly gifted child, striving to see the world as he sees it and to feel what he feels.
2. Reduce external pressures perceived by the child in school.
3. Plan for the child to experience genuine success he values, adjusting unrealistic goals and making short-term objectives to be accomplished through small steps.
4. Evaluate the appropriateness of the curriculum-does it provide opportunities for the child to build upon his strengths and to pursue his interests? Does it allow him to develop a readiness before building skills that are weak? Is it appropriate for his learning style and mental abilities?
5. Communicate genuine respect and acceptance of the individual, valuing him highly for his unique personhood.
6. Be flexible and involve students in planning and evaluating, allowing them to develop a high degree of self-management skill. Structure the day to allow student choice and pursuit of interests in relatively unstructured time periods.

By respecting their affective needs and not seeking immediate personal gratification, Titus set the stage for later success for these boys.

Differentiation of Affect by Principle 3

Students are offered a choice of levels, and assignments are geared to help students work successfully at these levels

Affect under this principle emphasizes students' abilities to make appropriate choices to develop their potential. They choose the groups and accompanying work, with many opportunities provided for leadership skills within these groups. As students work on reading contracts and reader's theater presentations, and choose locations and partners for work, they develop their sense of self and leadership skills. They also learn at what level they are comfortable, and begin to understand their strengths and weaknesses.

One difficulty posed by this principle is that students may not always make good choices. With regard to choosing material that is too difficult, Titus states that students quickly learn that the material is beyond their comfort level.

T So sometimes you end up with your lowest kid in...interestingly enough, they want to be in that top group. I...let them...

P OK

T And what happens it that I'll put the book on tape, make sure Mrs. Rooney or a volunteer is reading that book to them, and have them, rather than master the whole book, "x" number of pages I'm requiring them to master. So that the learning takes place, and they've heard the story and can still participate in the discussion.

P And how do they fare on the discussions?

T Usually quieter, because they, you know, if you're in a book above your reading level, it's usually above your thinking level. But I've found it usually takes once or twice in that situation, and they don't do that anymore (1intrv1, L. 976-1002).

With gifted students, there exists the likelihood that students may choose to underachieve. Titus' response to this is not as compelling, yet shows that she has worked through this issue. She states that if students choose books that are too easy,

she tends to view what other books the student is reading independently. It is her experience that students balance their reading material and that by looking at the overall picture, a teacher can determine whether or not a student is underachieving (refer to p. 87). She states that in this situation, she tries to "...encourage children to move with what they are more comfortable with" (1intrv2, L. 170-171).

The affective strategies used in Titus' classroom reflect her commitment to "rugged individualism," the belief that all students can harness and make use of their potential if given appropriate support and opportunities. Affective strategies underlie all classroom decisions; the needs of the student as a whole are considered before decisions are made for their cognitive growth. These decisions emanate from her biographical past and her experience as a teacher. Together they form the essence of who she is as a teacher, and why she differentiates instruction for gifted students in the way that she does.

Titus' Narrative

The purpose of this study was to describe how two expert teachers differentiated instruction for gifted students in the regular classroom. The overall question was, "What enables these teachers to differentiate instruction for gifted learners when the majority of teachers in the heterogeneous classroom do not? The answers to these questions at the first site are rooted in the teacher's belief system, her knowledge of pedagogy, her professional growth and reflection on teaching experience, and personal characteristics that propel her to explore new areas while also bringing her full circle back to herself.

Titus' Belief System

Titus states that her primary role as a teacher is to help students glimpse the potential that exists within themselves (1intrv2, 44-47) and to show them they can learn (1intrv1, 1038). She believes the most important thing she can teach students is to have a positive attitude toward themselves and their peers (1intrv4, 1142). Above all, she wants students to leave her classroom with an "I can" attitude.

I want them to feel that this is a safe classroom and a place where they are appreciated for who they are. I think you do that by respecting the individual, and respecting the individual means giving them the power to make decisions for themselves (sic)...I prefer to think of it (interests) as choices, because this is the context that I am after, is that "take charge person." That you take charge of who you are, and you are responsible for your own learning (1intrv4, 1142-1173).

By possessing an "I can" attitude, she hopes her students will become lifelong learners.

To help students believe that they can learn and to build in them the attitude that learning is fun, Titus invites learning by working through student interests.

The most important thing that I can do for these kids is show them that they can learn. And I think you do that through interests, and through success. Being successful. So I work very hard with each one to show them that they have a talent (1intrv1, 1038-1044)...

Titus views her role as facilitator of learning; she provides the opportunities, but it is up to students to make their own decisions based on their interests and abilities. She does this by providing students with choices. Her rationale for individualizing through choices is that not only does this method make students responsible for their own learning, but it provides students with feelings of self-worth.

I think that the way to show children that they have a contribution to make, that they are an individual, and that they have some worth is by giving them some choices (1intrv4, 855-860).

Titus also believes that providing students with choices invites learning (1intrv4, 972-975). She uses invitational learning by suggesting topics and books that interest them when they are reluctant to get involved. She prefers to allow students to make their own decisions whenever possible.

These basic beliefs about her role as a teacher and how she interprets instruction lead to strengths and weaknesses in addressing the needs of gifted students in the regular classroom. Her greatest strength is her belief in the integrity of individual potential and her sense of urgency and consistency in providing opportunities to guide this potential. Her greatest liability for this population is her need to be sure all students view themselves as being treated the same. Titus' belief system shapes how she defines differentiation of instruction for gifted learners. This

belief system then helps to determine the experiences that will be provided to these students both as members of a group, and individually.

I see differentiation as being essential to everyone. My differentiation goes across the entire classroom. I believe in the individual's right to an education to the best of their ability, and therefore that does include the gifted, but it also takes in the learning disabled, Chapter I students, and even my average students. It takes everyone in (1intrv2, 212-224).

To address the whole group needs of gifted learners, Titus teaches to the top by using abstract and broad based issues and themes, providing students with choices in assignments that allow them to pursue areas of interest or talent, and by using open-ended assignments. Equality of opportunity steers the class' direction, and Titus prefers this method of instruction to all others.

I believe...that every child has a right to be taught at their own ability level...I enjoy giving the same assignment to everybody and evaluating differently (1intrv1, 30-31 & 143-145).

Equality is also what Titus enjoys in using open-ended assignments.

The assignment is open-ended, everybody does it, we just perform at our own level. We all look like we are alike (1intrv4, 624-627).

Titus prefers that students "look alike" when they are working to avoid, "...the discriminatory thinking that sometimes comes with grouping (1intrv4, 608-614)." She discourages competition in her room, too, for she believes that although competition is a fact of life, second graders do not handle it well.

I think competition should be a personal challenge, in that we need to teach individuals to look at themselves and compete with themselves, not with others. I think competition should be within themselves (1intrv4, 686-703).

Despite her reluctance to treat students differently, Titus admits that individualizing is necessary.

Well, when you're dealing with children, the one thing...we all know (is that) no two children are at the same place in their learning. So we do need individual assignments (1intrv4, 632-637).

Individual assignments in Titus' classroom are given to students as a result of planned and informal strategies. Planned strategies include pre-testing in math and spelling to determine students' mastery of material, with assignments based on the next appropriate level of development. Informal strategies include the ways Titus responds in an impromptu manner to individual student interests and needs. Titus remains uncomfortable with individualizing specifically for gifted students, however, and considers it "elitist."

Everyone got the same shark lesson, but someone with an interest in it I will steer towards other literature or maybe spend an extra day with the topic so I can go into it more in depth because of a particular child. But I am not going to take that opportunity and isolate it. I do not believe that gifted education in the primary grades should be elitist. I do not believe that they should be treated, receive lessons that no one else receives at this point, because, as I have said earlier, it is still too young to identify beyond a shadow of a doubt (1intrv5, L. 156-171).

This equating of elitism with individualizing instruction specifically to meet the needs of individual gifted students limits how Titus individualizes for this population in the regular classroom. During our last member check, a year and a half after most of our work was done, I re-visited this issue with Titus. Our interview was a happy reunion, with lots of laughter punctuating the discussion of what was once such a sensitive issue to broach.

- P Do kids honestly think they are the same in your classroom, and is it important that they think they do?
- T I don't think they think they are the same, because we work from talents, from the positive. We talk about courage and talents. 'If you have trouble with this, you go to someone with a talent'
- P Do you give at-risk students separate opportunities? Are you more comfortable individualizing for them?
- T Yes, perhaps so. I will put a book on tape for the at-risk child, but I will not dummy down the book. I teach to the top and offer support to the bottom. I would have trouble teaching to the bottom of the class, and offering expansion and enrichment to the top.
- P If a child was reading three grade levels above the class, what would you do?
- T That's hard...I grew up in a dinky, rural, Wisconsin town. Every time the child next to me got a bad grade, she would cry. I always took that to heart...That's not an issue I can resolve just sitting here.
- P Would more training change you?
- T No, because all training has left me feeling angry. All the training has made me angry that its been offered to teachers as appropriate for gifted, and I see it as outstanding teaching techniques that should go across the board. I walk away excited about what I'm learning, but angry that its narrowed [to just gifted]. To me, these are the ways you should be teaching everybody.

Later in the interview, she mentioned the mathematical talents of one of her students. She stated that the gifted resource teacher had given her a game to use with him since he had tested out of the chapter they were working on in class. She laughed about her dilemma...the game required two to three students, and he was the only one who tested out. Titus went on to say that he also did not like to be singled out. The following dialogue indicates how her belief system has remained relatively stable on the issue of individualizing for gifted students.

T ...and he does not like to be singled out.

P How do you know that?

T Because he has said so. He won't go help a peer if you suggest that, and his mother has said in our conferences that he doesn't like to feel that he is smart.

P Now as part of his "talents," what do you do to help him be comfortable with that?

T (Lots of laughter, as in 'You caught me!' She defers to the gifted resource teacher.) Cathy and I just wrote his IEP, and she's going to do lots of independent studies along that line. I bought some games, and I put them in the class...

P & T ...for everyone! (shared laughter)

T And we'll have a math game day. I'll pair Mark up with other strong math students...subtly, I'll do that. I would never say, 'This center is for Mark!' (lots of shared laughter) I couldn't do that! (more laughter)

P Some teachers do! I want you to know that! So, I guess the equity/equality paradox is still a paradox.

T Yes! I think I'll fight it all my life!

Titus' belief system indicates strengths and liabilities in working with gifted students.

Because she teaches in a very low economic area, with many at-risk students entering and leaving during the course of the year, her beliefs allow them to be assimilated into the classroom quickly. Opportunities abound for students to make choices and pursue their interests, which may allow underserved gifted students to excel and be noticed.

At the same time, an identified gifted student may not get the support he or she needs in this classroom.

Knowledge of Pedagogy

Titus' beliefs of equality of opportunity, student choice and responsibility, learning through interests, and role of teacher as facilitator are a result of her adoption of the whole-language philosophy in conjunction with her biographical roots. These roots shaped her belief system, which in turn found credence and voice in the whole-language movement.

When I was in graduate school I was exposed to the philosophy of whole language. It fit exactly the goals that I was trying to accomplish in my classroom...(interview 4, L. 135-139).

Learning logs, journals, open-ended assignments, readers' theater, developmental math techniques, and use of anecdotal records facilitated Titus' ability to meet the needs of her gifted learners as well as others. However, her knowledge of gifted education was demonstrated in her use of abstract topics and themes, provisions for difficult reading material and pre-testing in math and spelling. The use of independent studies, metacognition, higher-level thinking strategies and a polished routine that allowed complexity to flourish further enhanced the learning environment and opportunities given to gifted students. Thus, her combined expertise in whole-language, gifted education, and ability to manage many details at once allowed her to address the needs of the gifted in the regular classroom.

Professional Growth and Reflection

Titus herself is a lifelong learner. She actively participates in professional organizations, teaches classes at the local state-supported college, conducts in-services in her division and those in the surrounding area, and has published three books

relating to curriculum design. It is important to note that these professional activities blossomed during her graduate school experience as a result of her growing expertise and the encouragement of a mentor at central office.

As a result, Bonnie guided me, observed in my classroom, continues to send literature to me through the school mail system, and has been a great support. She's the one that encouraged me to get involved with staff development and start making presentations to teachers (1intrv4, L. 145-152).

Beyond the mentoring relationship, Titus continuously evaluates her own teaching and modifies her practice accordingly. These changes range from minor ones regarding the implementation of technique to ones that evolve over time and cause her to re-think or question her belief system. The use of journals represents an implementation change.

Every year I change the types of journals I use, I change how I use them. Based on my own personality, I guess, things that I was not good in maintaining or having the children maintain, or things that the children had difficulty with, and I think that might be done in a more meaningful way. So every year I kind of change my journals (1intrv4, L. 397-406).

Titus' thoughts on evaluating student progress illustrate how she views her past and present self as evaluator of student progress.

When we talk a little bit about evaluation, I will talk to you about the fact that I no longer rank my students, and I'm interested in each individual and where they are today in their personal development...(1intrv4, L. 418-423).

As this research was conducted, Titus was in the midst of trying to resolve how she should approach spelling. Throughout the year students had individualized lists, but by year's end Titus felt that they were not retaining core words that she had hoped

they would have mastered by this point. She struggled with moving from individualized lists to grouping for spelling. The idea of grouping bothered her, for this challenged her thoughts about equality of opportunity in the classroom.

But, like I say, I do fluctuate back and forth, and wonder if, particularly in spelling, if...I cannot find a way to teach spelling so that the kids will retain their words. There are children who are natural spellers, there are others who will know their words on Friday, and by Monday they are gone. And so I am struggling to find a way to teach those children to spell, or work with their spelling...maybe there is no way, maybe it is developmental, like many theorists are saying. Maybe we're trying to look for something that does not exist. But I'm not ready to give up yet. And I begin to think, once I cannot get the individualized spelling to work, and I've tried whole group spelling, where you give everybody the same words, and that doesn't work, then you begin to think, "Should you group for spelling?" and so I'm finding this little paradox here. I don't want to group, because as I say, I feel so strongly about equal opportunity, equal learning opportunity, within the classroom (1intrv5, L. 471-500).

Titus mentioned her frustration with spelling on several occasions. She knew that her whole-group lessons from the past were ineffective for many, the individualized approach was also producing less than satisfactory results, and the only outcome she could foresee was to break the class down into small groups. While to many teachers this appears to be a simple solution, it was a value-laden one for Titus. And so she spent most of the winter and spring observing students' progress, waiting, reading research, and hoping other solutions would become evident. They did not.

Titus' professional training and experiences combine with her reflections on practice to lead her to new understandings about children, learning, and teaching. She seeks out opportunities to continue to grow, and makes professional growth part of her

professional responsibilities. This need to grow and be recognized returns her full circle to thoughts of herself as a child, and thoughts of herself as an individual.

Personal Characteristics

Titus is a people person. She loves to converse and teach, and this includes time with both children and adults. She is a performer herself, and her thoughts about who she is and how she came to be that way influence her classroom. She loves the stage and the limelight, and reflects back to the origins of these predispositions.

I really enjoy teaching. I just love teaching! Which is why I guess I stay active with the SDS's (Staff Development Seminars) and courses at the college. I have student teachers and practicum students. I give a lot of workshops for the college to their student teachers, and I really enjoy teaching!...I guess that's an extension of when I was a child. I had done a lot of performing as a child with my musical background. I sang my first solo at nine. I started performing at nine and was musically involved either soloing or doing duets with my father. And did a lot of musical work, all the way through college was performing and I really enjoy performing. And I guess the teaching of adults is kind of taking that aspect of it. I enjoy planning things and seeing them through...(lintrv4, L. 193-216).

Titus' need for an audience come back to the interests she pursues. She states that she goes through cycles, and these cycles become part of the curriculum she develops and shares with students.

My husband says that my interests fluctuate. They're my modes. "Mom is in her art mode." "Mom is in her antique mode." I go through modes. Right now I'm in an art mode. I love to go to art museums, I love to read art books. I love to read biographies of artists. And I also enjoy writing. I like to stay busy (lintrv4, L. 185-193).

Titus' interest in art was apparent in the unit she conducted on painters. Her need to perform is an extension of her interests and talents, and by developing these, she

influences the classroom and her students, which then leads to new avenues for professional thought and growth. Her life as a teacher and individual are one. Together, they define who she is.

Site 2

The teacher at Site 2 is far different from Titus in her teaching approach and beliefs about meeting the needs of the gifted in the regular classroom. However, like Titus, she has received much recognition in her school and division for her commitment to excellence in teaching and working with students. This second case study will depict a typical day in "Celia's classroom," explore the attributes of differentiated instruction that occurred for gifted learners, and attempt to glean an understanding of why it occurred in this classroom on a consistent basis.

Background Information

Celia is a young goal-setter. She has been teaching for almost five years, with all of her experience occurring in third grade at Randolph Elementary. Celia's short dark hair and quick motions hint at her passion for staying fit through competition on a master's swim team. Her confidence and sense of well-being are apparent as she teaches, and although she enjoys this work, she has sought positions of leadership within the community and school. She graduated from Shippensburg University with a B.S. in Elementary Education in 1988, and entered a local university in 1992 to earn a Master's in Educational Leadership. In her Career Summary (Appendix B) she outlines her leadership roles.

I continued to spend my summers as a pool manager and swim coach/instructor up until the summer of 1992. My summer position of pool manager provided me with the leadership experience I needed to pursue the direction of education leadership. I served as lead teacher for the at-risk program at Grover Elementary this past summer, while attending graduate classes at the university. I continue to pursue my

desire as a role of supervisor while working as a member of the college's clinical faculty (Career Summary).

Her highest honor came in the spring of 1993 when she was named the district's Teacher of the Year and then chosen as the recipient for the region's Agnes Meyer Outstanding Teacher Award. During the summer of 1993, she completed an internship in administration while acting as lead-teacher for the at-risk summer-school program at Pine Valley Elementary. By the end of July, she applied for and was appointed an assistant principalship at Howard Elementary. Celia attains her goals. Though married, she has no children and plans to pursue her career aspirations over the next several years.

In an interview during the spring of 1993, Celia described the demographics of Randolph Elementary.

C This year we had a little over 500...I think we were about 550 (students). Next year we'll be close to 700. And we're building a new wing.

P Which will house how many?

C It's ten new classrooms, so...we are basically a middle-class, low middle class population. Very low minority population. Extremely low. Maybe 5%, if not less. We pull from Lake Arrow division...

P That's the lower area?

C Yeah, like middle. There isn't a lot of diversity, and I think that probably makes it a lot easier. We don't have keeping up with the Jones' kind of thing. Most of the kids are pretty much kind of the same. They wear pretty much the same kind of clothes, and most parents are blue-collar workers; we have a few, very few professionals.

P How many are on free or reduced lunch, do you know?

C That I'm not sure of. But every year, in my class, if you could base it on that, I get about three.

P And the parents work mainly where?

C A lot of them within the community. We don't have a lot of commuters. We have a lot of moms at home. I mean, I know I have at least half my parents...who are moms at home (1intrv2, 1503-1581).

Like Titus, Celia has a very diverse population in her third grade heterogeneous class.

C Oh, we have a little bit of everything. There are 23 students in the class. We have a mainstreamed Emotionally Disabled (E.D.) child, who comes only for the social studies, science, and the specials and lunch with the kids. Of the 23, there are five identified gifted and talented. Only one is identified math; the others are more language or general...more in that category. Two were just identified as, of December. The others were identified prior to third grade...One child came to school, came to Randolph Elementary, at the middle of the year, so that only gave her half a year to be in our school system (before being identified for the gifted program). The other child is the one I was telling you is the gifted Learning Disabled. He spent a full year in the LD self-contained classroom last year. Spent more time out of the classroom than in that classroom, but was not just resource. So I don't know what, the percentage amount of hours you have to be in an LD classroom to be considered resource or not, but he was pulled out into another classroom. The teachers felt that he was very distracted because he was bored. He showed tendencies of giftedness, so he goes now to an LD resource with ours, a pull-out program four times a week for 45 minutes...He also goes to speech two times a week for 45 minutes. I think other than that, we've got average and above-average (students).

P So you don't have any Chapter I?

C I have one Chapter I and one who qualifies for the at-risk program.

P And so were they grouped to be an average and above-average (class)? Were they grouped to be totally heterogeneous, and this is what your pool of students at Randolph is coming from, or, how is that?

C I don't believe this is meant to be an average, high-average group. The only thing that...I mean, I see more across the span, but I think the only reason it would tend to be a little bit more high-average than some of the other classes is that I've had a lot of siblings, parent requests (2intrv1, 66-116).

Within this classroom there are four students identified as gifted and talented for various abilities. One is labeled learning disabled/gifted, one gifted in math, one gifted in language arts, and one for general intellectual ability. To meet their needs, Celia informed me that she works with the Learning Disabilities resource teacher to implement an IEP (Individualized Education Plan) specifically designed for this student; and for the math student she conducts an after-school math club, uses a problem solving kit within the classroom to extend and enrich concepts she is teaching, and has set up an independent study using Lego/Logo to teach the student programming skills. The student identified as gifted in language arts receives extended writing opportunities in the classroom, and Celia uses a combination of pre-testing, enrichment, and acceleration to address the needs of the two students identified as generally intellectually gifted. She collaborates regularly with the gifted resource teacher to plan and evaluate her instruction for these five students (2oba, L. 70-79).

When I asked Celia how she became involved in working with gifted learners, her answer surprised me. She revealed this decision was not by choice, but by assignment when initially hired by the principal. Her training came from Staff Development Seminars within the county (a.k.a. "SDS" classes), comprising a total of approximately 15 hours on the characteristics and needs of gifted students, shared

inquiry, and differentiating curriculum to address student needs, abilities, interests, and learning styles. Celia discusses her roots in gifted education.

P How did you get involved in gifted education?

C Actually, I was told I was going to do it! (laughter) I'll be very honest with you, my first year teaching! 1988, when Randolph was first being established, we were in the church working. Our school was not built. There were thirty fifth graders at the school. We had fifteen children per class. Very small classes. I was a new teacher and you didn't say no! That's when we were more homogeneously grouped in this county. So we had somebody on our grade level who was experienced working with learning disabled children, so she took them. Another woman who had been off teaching for seventeen years, on maternity leave I think she said...Marilyn (principal) just felt like, didn't want to overwhelm her with expectations other than just getting back into a full-time teaching position. And knowing that you were expected to take the training courses, I think she thought that somebody new just out of school would be willing to do it. And I was!

P So this is your sixth year teaching?

C Fifth year. So immediately they told me to take the Talents class and over two years I think I finished all of the county's training. Differentiating, identifying, talents, and then we started getting more in the 4-MAT, and learning styles, which I think were taken over. There isn't much, I think I've taken them all. But I love it now, and always had the opportunity to phase out...You know some schools sort of make you change. Nobody else ever wanted to take it...

P ...on your grade level?

C Right. There's lot of parent pressure. A lot of parent expectations go along with that. And there are several teachers on the faculty that have done it for several years. They are trained, and want a couple of years off. I just feel that the benefits outweigh [the disadvantages] (2intrv1, L. 144-204).

Although Celia states that "there isn't much" [training for teaching gifted learners],

there is probably more available to teachers in this county than in many other

divisions. During the 1992-93 school year, a total of six SDS classes (approximately

30 hours of direct instruction) on understanding and meeting the needs of the gifted were available free to teachers. In addition, a master's program in gifted education was available at a local university. Because of her coursework in educational leadership, however, Celia was unable to take advantage of some of these opportunities. When I asked her what facilitated her ability to differentiate for the gifted, she cited a combination of reasons.

...I guess just the communication between the parents and the students. And certainly some training. And some reading. But nothing that said, specifically, you should pre-test this skill and this is how. I never had someone sit with me and say, this is the way to take a math unit and enrich it. That I've had to just do on my own (2intrv2, L. 887-896).

I discovered that "on her own" for Celia meant seeking support from the gifted resource teacher, participating in discussions with colleagues, and continually searching for "better ways" by critically reflecting upon the match between her teaching and the needs of her students. The simplicity and straightforwardness of her day are deceptive. She embodies strong beliefs about teaching and learning that she consistently communicates to her students. These core beliefs include the following:

1. Children should be problem-solvers;
2. Learning needs to be modeled.
3. Self-monitoring strategies should be taught; and,
4. Respect for one another prevails whenever people are together (member check, 2intrv3, L. 247-405).

These themes and the consistency of her expectations for students will become more apparent in the following section, "Celia's Day."

Celia's Day

The drive to Randolph Elementary leads through a new subdivision in a high growth area of the county. Across the street from this school is a second elementary school attached to a middle school; all three are filled beyond capacity. The surge of recent newcomers creates a suburban pace to the school, and teachers arrive at school early to get a head-start on planning activities to help involve the newly-formed community. As the dew glistened on the spring grass and red-budded leaves fluttered on the branches of young trees, Celia and four other third grade teachers gathered to plan their Mexican Fiesta for the following day. They discussed the parent volunteer schedule for the fiesta and made last minute changes as students began to stream through Celia's door at 8:50 a.m. Students hung up their jackets, put bookbags on hooks, found their timelines from the day before, and began working on these at their desks. On the board a message had been written: "Morning work: Timelines." Students were expected to depict significant events in the history of Mexico along a timeline, and illustrate. Celia explained why she chose this activity for the class.

We were doing history, Mexican history. To me, I guess that kind of touched me. I'm a pictorial learner, and in teaching history, just to show sequence of that event. I was trying to make it a more concrete experience. It was something that happened in the past. I mean, three's [personal learning style as indicated from 4-MAT] hate [studying] history. We see no reasons to...it's done, let's just go on. And to make it something that I'd enjoy and visualize. Plus I had a lot of artists. And that way those children could excel. I guess just making it more of a concrete experience (2intrv3, L. 417-436).

Students chatted with one another as they went through this exercise. Chairs that were stacked on the desks for last night's custodians came down one by one as students

arrived at their seats. A group of six students gathered near Celia's desk to ask permission to sharpen pencils, run errands, and get answers to other questions. A schedule for Thursday was posted on laminated chart paper on the board. Fat, purple marker outlined key events:

Thursday's Schedule

Morning Duties	8:45-9:05
Spelling	9:05-9:35
Handwriting	9:35-9:55
Math	9:55-10:05
P.E.	10:48-11:53
Lunch	11:36-12:06
Recess	12:15-12:45
Reading/Language	12:45-2:30
Snack	2:30-2:40
Social Studies/Science	2:40-3:15
Closing Duties	3:15-3:30

At 9:00 a.m., a buzzer sounded. Students became quiet and announcements began with a student leading the school in the Pledge of Allegiance, followed by the day's lunch menu. The principal added thoughts about the weather and upcoming week-end, and put in a plug for Saturday's school carnival, a fund-raising event sponsored by the PTA. Finally, student birthdays were announced followed by the statement, "This concludes morning announcements."

With this routine behind them, Celia began her day taking care of paperwork. "The nurse needs to know how many of you have been to a doctor this year for a check-up?" Four students raised their hands. She recorded this and then began the day's instruction at 9:10 a.m. She directed students' attention to the morning schedule

and identified skills and objectives to be covered for each subject area. A change in the schedule was an unplanned 2:30 assembly to see a first grade performance.

Lessons began with students breaking into subgroups for spelling. Celia called a group of six students over to her. They were given several directions and then left the room with papers in hand. Fourteen students remained for spelling dictation. Celia dictated sentences to them from a spelling teacher's edition. Sentences included:

It is clear the snakebite is harmless. (repeat)
 "Clear and harmless are the words."
 I have had these brushes for years. (repeat)
 "Brushes and years are the words."
 The new dresses will charm you. (repeat)
 "Dresses and charm are the words."
 A turtle is an interesting pet. (repeat)
 "Turtle and interesting are the words."

Students were quiet and focused as Celia read these sentences. She walked among the students, clustered in three groups, throughout the spelling exercise. Upon noticing that one student had started a fourth group, Celia asked him if he would like to join a pre-established group. He moved to a group in response. The consistency with which she delivered this lesson emitted a comforting and supporting warmth to the room. Both the students and their teacher appeared relaxed and at ease.

Later, Celia explained why some students left the room during spelling while others stayed to take a test and practice dictation with her.

P ...at one point children left the classroom and went with someone else, but I don't remember...

C That was the review unit, which I hate and I usually skip, but I had too many kids in this class, 'cause we're getting more and more heterogeneously mixed, that can't afford to skip the review unit. So those who have mastered the pre-test, they like to play the class game, so I don't knock them out of that,

but when it comes time for sentence testing or anything like that...They were in the library playing a board game.

P OK, so they left and went to the library. What kind of a board game?

C Actually, it's a series that came with the book, and it's language based, yes. So even though it's the same words, and they're all different, but it's like analogies with the words, so it's just another whole different way of looking at the words. And it's kind of a break for those kids who have studied for six weeks the challenge words. They are tough words.

P So who oversees them in the library?

C That was the STARS [at-risk] paraprofessional.

P And that was a group of about how many?

C Six. And usually it's about the same six.

P OK, good.

C So, they're just rewarded because they knew the words. And the others don't mind that, because they know it was based on...they deserved it. They earned that right to be out of the room (2intrv2, 717-766).

Upon completing the ten sentences, Celia re-read them as students checked their papers. She then collected the papers. As she went among the groups, she told students to take a few minutes to work on their morning work, which was the timelines they began earlier. As students worked on these, Celia stood nearby and checked the collected spelling papers. Not a word could be heard in the classroom, but now and then the door would open and another student would slip back in and get to work. These were students who had left to go to the library to work on the alternate spelling assignment.

By 9:40, most of the students had returned to class. Celia asked a student to turn off the lights, and as she did so, Celia clicked the overhead projector on to signal

the beginning of handwriting. Students immediately pulled out their handwriting books and focused their attention to the letters on the overhead. This sequence of events or sense of flow amazed me, for it appeared that teacher and students worked effortlessly together. Later, I learned that this was part of a cooperative learning management system Celia had established to promote group cohesiveness and ownership of the classroom environment.

Celia asked students how the cursive letters on the overhead were similar. The handwriting lesson continued with direct teacher instruction followed by opportunities for students to respond and model. Letters on the overhead were: be, vi, op, and wo. After four or five students responded, Celia said, "Yes, as Jeanne mentioned, all of these letters are connected at the middle line." She then asked one student to go to the overhead and using the red overhead pen, connect the letters in the appropriate place. Students proceeded to call upon classmates to go to the overhead to "connect the high-curve connection." After this was done, others went up to the projector to try writing the entire letter combination in the space provided on the overhead adjacent to the combination.

At 9:50 the last two students returned to class, along with the woman who had come in at 8:30. Celia continued her handwriting lesson with students calling upon one another to go to the overhead. At least half the class had an opportunity to go to the overhead. She then said, "All of you will have an opportunity to practice in your books, now." Without hesitation, students pulled out their books and opened to page 73 as instructed. Celia asked them to name the letters that had the high-curve

connection. Students raised hands and responded, and then Celia gave directions for the remainder of the page. Students were reminded about "correct posture" for writing, and as they completed the exercise, they got up to use the pencil sharpener by the door at their discretion. Celia helped some students individually as they worked. No students talked as they worked, and the atmosphere in the room once more conveyed a sense of quiet contentment. Students raised hands as they finished and Celia looked over their work and recorded grades in her gradebook. Students who were finished were instructed to work on their timelines.

At 10:15, math instruction on liquid measurement began by a student sharing items she had measured at home the previous evening. This was an optional enrichment assignment, designed to extend and apply classroom concepts to daily living. Celia states that, "Often my homework assignments are just like that, trying to tie it in, just finding real life examples of something we're doing in the classroom, because I think it will stick more," (2intrv2, L. 159-164). Hershey's Syrup, water, orange juice, and milk were some of the items mentioned by Alissa. Celia thanked her, and then told the class, "Today we're going to look at measurement a different way. We'll start with the smallest measure." She held up a cup container. On the board she hung some butcher paper that said,

1 cup = 1/2 pint
 ___cup(c) = ___ pint (pt)
 ___pint (pt)= ___quart (qt)
 ___cups (c) = quart (qt)
 ___ quarts (qt)= ___gallon (gal)

As Celia worked through this chart with students, she held up examples of a pint, quart, and a cup and asked them to estimate how many units were needed to balance the equation. Students were allowed to use the sink to fill the containers to check their responses. As they filled these, Celia asked one student to explain how to figure out these equations. He came to the board, mumbling as he wrote. He arrived at the correct answer but was unable to verbalize how to get it using diagrams. Celia helped him by drawing a tree to graphically show how many pints stemmed from a quart, and how many cups stemmed from a pint. The graphic display helped several other students understand measurement concepts.

How many quarts = 1 gallon? Jugs were displayed and students were given time to estimate and post these on the board.

Celia gave students some information. "2 quarts = 1 half gallon. So how many quarts = 1 gallon?" Students wanted to continue to estimate. Celia told them estimating was good, but there was a way to solve this problem using the information given. Students had trouble with this. Celia again illustrated on the board, this time using a number sentence method to solve:

$$\begin{array}{r} 2 \text{ quarts} = 1/2 \text{ gal} \\ + 2 \text{ quarts} = 1/2 \text{ gal} \\ \hline 4 \text{ quarts} = 1 \text{ gal} \end{array}$$

Students were then instructed in a follow-up cooperative learning activity using creative problem solving skills. Groups of students were given a large sheet of bulletin board paper. They were instructed to write the words "quart" on one side and "gallon" on the other. Directions were then given. "Knowing what you know, I want everyone to give suggestions to their recorder on all the different ways you could make a quart. Let's suppose you don't have a quart container. How could you come up with a quart?" Celia then gave an example, and a student shared a possible

solution. "I'm looking for group to get the most different ways to get these measurements. Other questions? O.K., then, go to work in your group! (2ob1, L. 166-184).

During a follow-up interview, Celia explained how she changes the composition of base groups to achieve instructional goals.

And certainly some of that [base group arrangement] is changed. If we're doing something that I really think, well this group of four FOCUS [gifted] kids I would like to work together, then we'll just change seats. And the kids don't ask why. Often, or I'll just say I think you guys would work really well on this together. The only problem they have with that is they form great ownership to their [base] group (2intrv2, 608-617).

As students worked, Celia hung a recipe for "Mexican Fudge" on the board, and assembled cooking materials. Upon completing her preparations, she pulled the class together to share solutions to the open-ended exercise. At one point a student shared a response already given, and Celia responded by saying, "Let's not repeat, please. Listen to your classmates!" One child shared how many teaspoons were in a quart. Celia asked him to explain how he solved this. He stood up and did so. Another group proudly claimed that there were 768 teaspoons in a gallon! Again, Celia asked students to explain their solutions. They explained that one group already stated that there were 192 t in $\frac{1}{4}$ gallon, so they multiplied this by 4 to arrive at their solution. Students were complimented with "good thinking" by Celia.

Jared shared 258 T in a gallon. I looked this over and found an error. He re-did his math, smiled at me, and said you're right! Celia encouraged him to get a calculator to check his math (2ob1, L. 213-217).

After all groups shared their solutions, Celia announced that it was time to make Mexican fudge. She reviewed the recipe on the board, which had blanks in place for

the amount of each ingredient. She read the amount from the regular recipe aloud, then asked students to tell her how much of each ingredient was needed for a doubled recipe. As students helped Celia with the recipe and measuring, others played a math game. Celia told Anthony to write four numbers on the board and explain the rules to the class. Anthony wrote the numbers 8861 on the board and told students to mix the numbers in any order to come up with 24. Between each number, students were to apply one of the four basic math operations. "You have to use each number, and you can't repeat a number," he added (2ob1, L 229-239). Each group was given several cards to work on and sheets of blank pages to record their responses. Several students were instructed to switch seats before the game began. Celia explained how students should work together in their groups, then added: "This is a thinking game. When you get an answer, you can share it with your group," (2ob1, L. 244-248). Students worked excitedly at their desks as Celia called others to help with the measuring for fudge.

While students quietly worked in small groups on the math game or participated in the cooking and measurement activity with Celia, I took note of the learning environment. A number of tagboard sheets were laminated and hanging from the ceiling through the use of yarn and paper clips. These included:

Instead of a Book Report, make: a commercial about your book;
a book cover; a news bulletin; a cartoon; a skit; a comic strip;
a letter to a friend; a puppet show; or a poster.

Design a new cover for your book. Include the title and author.

Book mobiles--Cut out four shapes. Shapes can be about something in the book. On the shapes tell the name of the book, a character, what happens, and why you liked the book. Tie your shapes to a hanger.

Instead of a Book Report, make a character study.

Investigate one of the characters from the book. Answer these:
Character's name, did you like the character why or why not. Where did character live, and what did the character do in the story?

Bookmarks--title and author, w/picture bag puppets

Movies--Cut a 3 by 36 inch strip of butcher paper Roll each of the ends around a pencil Draw scenes from the story. Roll your movie up and tell a story.

Five other tagboard displays hung over the clusters of student desks. Each cluster contained 4-5 desks, and the tagboard display illustrated each group's name and group members. These appeared to illustrate the "base groups" Celia had mentioned earlier, and in a follow-up interview she described how these were formed and how they tied in to her management system, a system that reinforced positive behaviors and group cohesiveness.

P Good! OK, let's go to line 86. I'm describing the set-up of your classroom where you have the students grouped in clusters, and then above each cluster is a tagboard display describing the group and who's in it. How long have students, and I guess that sort of goes back to a question I wanted to ask you, too...maybe we could tie them together...talking about your classroom management routine, and how you worked in cooperative learning with that, so maybe start by telling me about the classroom management routine as it relates to this set-up and going back to how long students have been in these particular groups?

C OK. Actually, they were in the groups from day one. I mean, certainly within that first month lots of changing.

P So these were the base groups they've all been in...they've stayed in those base groups.

C After some comraderie began, and they got to work together and know each other, they were asked to pick a name. I didn't want to do that until I knew those groups were set. Because once they gained ownership to each other, I couldn't...once they formulated a name together, I couldn't move them apart, so I had to wait and make sure the personalities were going to work. Most of the time...

P And what were the decisions made for those base groups? How were students chosen for them?

C Basically just trial and error.

P Were there like interests, or abilities, or styles, or what?

C All of the above. But mostly, just ...

P Could you describe a "typical" group?

C ...mixed ability.

P OK, mixed ability was a criteria then.

C And really, you have a real strong math student with a real strong language student. Somebody who likes to speak for the group, and somebody who's just real cohesive. I guess you'd call them your type I. Just likes everyone to get along. And not knowing these children, that's why it took a lot of switching to kind of mix. And certainly, some are better than others, but I'd gotten to a blend that worked the best.

P And at what point was that?

C Probably not until...well, I had student teachers, so a little bit after Christmas. Mostly because two student teachers came in. So, we had a lot of changing going on. I don't get to really work with the kids as well as I'd like because of that. It's a sacrifice I make, but it took until they left the room and I got to be the only person there. And as much as I love having them, I'm always glad when they go because of that. I just miss that bond...

P ...that bonding...

C Yeah, the bonding. Because it's important that they feel that, because if they don't feel that, they're not going to go into teaching. There's too many other things. What brings you there is the bond you form with those children. So you have to step back and let that happen. And then I have to step back for

a second student teacher and let that happen. So it doesn't happen with me, now, until after Christmas. Meanwhile, I just get a whole lot of observing done, so it is a good opportunity for that. But not really until after Christmas did they then come and get a name for their group.

P OK, then tell me about that process. They got a name, and they're basically set in those groups. And how does the management routine tie in to that.

C There was a chart near the door, it was like a ladder, and together they decided...and I don't think they're ready to decide this until after Christmas...what they...the ladder stopped at 10, 20, 30, 40, 50...increments of 10...and they decided what would be an award the group would achieve at 10. And it was really interesting to listen to their brainstorming, because they said something really good should be at 50, and work it. And so they knew that, and I don't think they could do that earlier.

P And to agree on the award.

C Right.

P What were some of the awards?

C I think 10 was some free recess time or free computer lab time, I think 20 was a no homework slip pass...there were always two options at each one, like a special snack. 30 was like lunch with me, or ...I can't remember all of them. They chose them all.

P OK

C They listed them all. 50 was a popsicle party for the whole group. And when they got to each, they had to work together to decide, because they came to me once and said, "Well two of us want this and two of us want that," and I said, "Well, then, what are you going to do?" And together they would decide, "Well this time we'll choose this, and then next time we get to 10 we'll choose that." So, they're not ready to work that well together as strangers to each other as well, really until after Christmas.

P Well, I was real impressed, they seemed to be so...

C Well, it works wonderfully. You don't have to say anything, except I'm waiting for a group to get ready.

P I noticed no time seemed to be lost. Transitions were very smooth as a result.

C And certainly, you would not have seen all of that in the beginning of the school year (2intrv2, L. 406-568).

This management system explained the sense of flow that appeared to permeate all activities in this classroom. Students apparently understood what was expected of them. A sense of bonding permeated among and between students and their teacher, and coupled with positive reinforcement, they worked together to create an atmosphere of mutual trust and respect. This flow was evident in all of my visits to this room.

Other aspects of the learning environment caught my attention as well. Near a set of encyclopedias and resource books on Canada hung a chart. "Choose one of Canada's ten provinces to research and report about. Use the fact sheet to record your data" (2ObA, 23-28). Next to this was another chart titled, "Wildlife Wonder." On this was written, "Choose one of these Canadian critters to research and report about. Use the fact sheet to record your data" (2ObA, L. 29-32). Pictures of various animals were displayed around the chart.

Across the back of the room hung a series of posters illustrating the different levels of Bloom's Taxonomy, with different projects listed for each level. Underneath these, another series of posters listed four steps to problem solving: Understand the Problem; Make a Plan; Use the Plan; and Answer and Check. A stereotypical detective holding a large magnifying glass peered over these. In one corner was an Apple Iie computer with a simple program written in Basic hanging on the door nearby. Computer rules were displayed. Along a side wall was a display indicating the tenets of Talents Unlimited, a program heavily endorsed by the county under

previous administration. I was curious to see the fit between these displays and the implemented curriculum.

Other decor in the room included a "Caught Being Good" bulletin board in the back of the room, and a homework and morning work board in the front to track students' progress. An area concentrating on Mexican studies included a sequencing chart, colored paper flags made by students, a map in the front of the room, and a display table with ponchos, hats, maracas, and books. I had set up shop on a table that contained Lego logos for the student identified as gifted in math. An Apple Macintosh computer was behind me in a corner, and nearby stood several bookshelves that contained dictionaries, a Childcraft set, readers, health books, and other reading materials.

After noting these items, I got up and spoke to Celia for a few minutes while she stirred the fudge. One by one, students began to come up with complaints about others in their groups. After several complaints from students who "usually don't complain," Celia asked a student to turn off the lights. She announced that it was probably time for another activity since, "for whatever reason" students were beginning to get off task. Students cleaned up, put their heads down on their desks, and waited. A quick glance at the clock indicated that it was lunch time anyway, and students were dismissed by groups to wash their hands and line up. Recess followed lunch, and students re-entered the room at approximately 12:45 to begin reading and language arts instruction.

At 12:45, students returned to the room, got water, and waited at the sharing circle. One girl, who had the "sharing bag," began to share items with the class. She pulled out a Coke can that rotated on wheels to twist and turn, complete with sunglasses and headphones; a monkey that squealed, a jewelry box with special jewelry, a "bunny bouncy ball," a bunny that she had made in art, a bunny candle, and two giant stuffed bunnies that I could not believe fit in her bookbag! The students and I had a lot of fun with the Coke can, trying to decide what made it move: air or sound.

The children sang Achy Breaky Heart," clapped loudly, sang "Hush Little Baby" softly, and yet, after all this, we were still uncertain as to whether air currents or sound waves or both were responsible for the can's responses. Next, a little boy shared a box turtle with the class. He put it in the courtyard for the afternoon (2ob3, L. 41-50).

I asked Celia about the purpose of sharing time, and how she came up with the idea of the "share bag."

P Let's start with the purpose of sharing time...

C Well, as I look through them, I guess the most important reason is I'm looking at a whole-language structured classroom, trying to make as many implementations of that as possible, on the ways I feel appropriate in the third grade. One is just that it's a shared language experience. The children are encouraged to get up and speak in front of their peers...

P ...and the rationale for that is what?

C Just that it's another language experience, in addition to reading and writing.

P Is it to develop oral language, then?

C Oral language, and with that, too, looking at our STARS [at-risk] program, is building self-esteem. So certainly any opportunity where

they can bring home to school, whether their hobbies, or anything they might be, and sharing that with their peer group. Plus also listening skills, because they are afforded then the opportunity to question their peers about things they have brought in, or shared homework, so they have to listen to what they are sharing to be able to formulate a question from that.

- P Tell me about...I guess you have the "share bag." What is the "share bag" and how often is that done?
- C That's done daily. Basically, it was formulated because in past years I constantly had children bringing in things daily. Certain students, and certainly not wanting to say "No, you cannot." It would just take too much of the day on sharing just things they may have gotten that week-end, not necessarily related to the curriculum. So I decided to get a bag that would travel home with a student. And they were able to fill it with as much as they want. And it sort of makes its rounds. And once every child's had an opportunity, it just started again. I'd say each child got to have it five times [in the course of a year]. It's real cute; they keep track of it. "Alright, who hasn't had it a fourth time?" And they're pretty honest about it. And I didn't really track much of that. I didn't know how much it would have to be done.
- P Well, I think the bag was a big help. They remembered to bring their items in.
- C Maybe three times throughout the year it was forgotten, but brought the next day.
- P O.K., then how did you come up with that idea?
- C I guess just because, you know, solving a problem. I was thinking what could I do? And I thought of doing a Randolph Elementary bag, and then I thought, no, why don't I make it? And so, you know, put Mrs. L's Class Share Bag so it doesn't get lost. So I guess just a problem solving technique.
- P That's neat!
- C Plus a certain wanting to have the children share. You know I hated to get rid of that. But it had to be controlled. It had to be controlled.
- P How about the topic for sharing? Do you change it, or is that always up to the student with the share-bag?

- C That's completely up to them. The only thing we do is if we know a child's having a birthday over the week-end, we'll just say maybe it should go home with that child, knowing that they would want to share birthday items anyway. It solves two problems that way. Won't have two kids that need to share.
- P So tying in with student interests, then...anticipating. So that one's a total free choice (2intrv2, L. 32-142).

Other instances of sharing time emerged during the day, such as the sharing of homework and the sharing of ideas or responses with the whole class or base group. The share bag represented a routine used after lunch to develop oral speaking skills as part of a whole language approach. Later in our work, Celia commented on the importance of students learning to listen to one another, and she referred to this sharing routine as one way she accomplishes this goal.

With sharing time behind them, students prepared for language arts and reading, a combined block of time that integrated a content area, reading, and writing. During some observations, Celia used shared inquiry with the whole class, using trade books and teacher made interpretive questions for each chapter. At other times, she used contracts along with trade books, and students participated in a variety of large group, small group, and individual activities. In both scenarios, students usually read from the same book. This "base book" correlated with the social studies or science unit being studied, and usually was at or above a third grade level.

On this particular afternoon, Celia made the transition from sharing time to reading by allowing students to get a drink of water before resuming places on the carpet around her. Reading would commence by students listening to the final chapter of George's Magic Medicine, a book she was reading aloud to the class. She began

by asking students, "Who remembers what happened to George?" Students raised their hands and shared their thoughts. Celia then began reading where she had left off in the story.

Students sat on the floor quietly, with two students seated nearby in chairs. One of these was a girl busy working on something. As Celia read, several students lay down and stretched out, but still listened quietly. Students responded to the story with laughter and lots of "whoa, whoa, whoa." Others tossed out other ideas the character could do, and then others built upon these ideas. Once Celia resumed after each of these interludes, however, they quieted down. At the end of the story, a girl called out the cooperative groups by name and students returned to their seats. They pulled out their books, Mystery of the Plumed Serpent, and returned to the circle with these (2ob3, L. 55-93).

Knowing that Celia integrates reading with social studies and science, I asked her how themes were chosen. Her response indicated the emphasis on team planning used in many schools today.

P So then how are the themes chosen? As group themes, or from curriculum guides, or any from student interest or teacher interests?

C I think it's all driven from what we have to teach. It starts that way. Because we have to teach it. Then it's expanding, because we choose books. Each of our themes, social studies and science, there is a trade book now that goes with it. And what we've done over the years, is if a kid didn't like the book, we've thrown it out. And that's where the student interests comes into play. And we basically took those that go with the theme, and we have a variety. We have a mystery, we have fiction, we have non-fiction; so we're trying to address student needs there, as well. Plus our needs. I mean, each of us has a favorite book (2intrv2, L. 1268-1289).

In a later interview, I asked Celia how she was able to meet students' needs with this system. Her response indicated that material is on or above grade level, and support is provided to those unable to function independently at these levels. In addition, she utilizes an enrichment approach to extend learning and provide choices for students

above grade level. One of Celia's greatest strengths, her ability to bond with the class and have them bond with one another, appears to bias her at times with regard to choosing appropriate reading material.

- P You basically had one book for the reading themes. Did this meet the needs of all the kids, or were there some kids who could probably have gone through two to three books on the themes, and yet were there reasons that couldn't be done, or was chosen not to be done? How do you feel the one book worked for the whole group?
- C You know, I guess I take ownership to everyone staying on that because everything we do then, revolves around that book. What ever we do, I mean we're out on the playground, and the kids play the characters...
- P ...common knowledge for the class...
- C Yes, and I like that bond. I have tried to enhance, and that's where the centers come in, and I always go to the library, and either pull books by that author or on the theme, so the children can expand that way.
- P So further enrichment, then.
- C Right. And certainly, the readability is not necessarily...but we start with a real easy one, and we work up to Castle in the Attic, which is actually more like a sixth grade reading book, so we go with the norm that way, but it's more the activity centers that are enrichment centered more than the book. Just because we've put so much time and energy developing trade book themes; centered around a theme (2intrv2, L. 1416-1456).

By gearing material up and providing support for those who need it in a heterogeneous format, Celia further acknowledges her bias toward using an accelerated learning approach with at-risk students.

It is interesting to note that this approach is one advocated by proponents of the inclusion model for special education students (Jenkins & Jewell, et. al., 1994).

Randolph Elementary is currently moving in the direction of full inclusion, with teams

studying these issues and students fully integrated in regular classrooms on a limited basis this year. For this study, it is important to understand the expectations that administration, the public, and various advocacy groups place on the regular classroom teacher.

As students settled on the floor around her with tradebooks in hand, Celia explained the epilogue and prologue before reviewing student contracts and assignments. She explained to students their choices on some of these assignments, and then told the class that she would begin by reading aloud. Students followed along in their copies of the book. After several minutes, Celia said, "Please read to the end of the chapter and then we'll talk about it." Students did this. At this point, three students, all boys, followed her over to the reading table and read silently there. The rest of the class stayed at the circle area and read quietly, giggling at certain sections. As they finished, they got up, walked to the front of the room, and took a copy of the contract. The title of the contract was, "The Mystery of the Plumed Serpent-Chapter 8" (see appendix).

Celia's decision to use the same tradebook with all students relies on two assumptions: she chooses to "gear up" the curriculum and provide support for those unable to work independently at this level, and student contracts are developed to provide challenging extensions of the literature. The three boys working at the table with Celia listened and followed along in their books as she read aloud. From time to time she stopped and asked them questions about what she had just read. Students also read orally, and were given a separate contract from the rest of the class. Celia

explained to me how she works with others on her grade level to develop suitable contracts to correspond to themes.

P Explain, then, how you do reading.

C ...we don't do basals, except for occasionally we try to feed them into...for example, if it correlates with weather and the water cycle, there's two great units in there and we'll pull some in to do it that way. But we have pretty much adopted enough series of trade books that we use that approach. And with that we've developed contracts. And a lot of it, some it provides you with higher level thinking questions. When we sit down as a grade level, that's always my input. And often they'll change their questioning because it doesn't suit.. they're like, "My kids don't think like that. I won't get those responses (2intrv1, L. 246-266).

While team planning may at times hinder Celia's ability to totally diverge into different content areas, it does give her the opportunity to influence team members to utilize strategies for gifted learners.

One section of each contract is devoted to vocabulary. At approximately 1:40, two girls came to me to ask what the words "careening" and "authorized" meant. A third girl came over to ask about "culprit." When another student came to me about the vocabulary, Celia asked her if she was using context clues along with her group to determine what these words meant. Students were encouraged to use a dictionary if no one in their group knew these words. Noting that these words were not in a traditional third grade basal series, I once more pursued my interest in how Celia justifies the use of a single book for reading instruction. In addition, I was interested in any other types of reading used in the classroom.

P Alright. Now here's something that I need to address. During some of the observations you used shared inquiry using trade books and teacher developed interpretive questions for each chapter, and at other times you used contracts along with trade books, and students participated in a variety of large group,

small group, and individual activities. Now, in both the scenarios I observed, students usually read from the same book. Now you talked a little bit about this base book; that you liked the idea of the kids bonding with the same knowledge base. So my question is, did you have times when kids chose books of different reading ability levels, did they always use the same book, were there times that you used a variety of reading ability levels, or not.

C There was, but most of that was at silent reading time.

P OK, then tell me about the different types of reading that you did. You had silent reading, you had whole group...you read to the class. How did you choose the book that you read to the class?

C I usually just tried to stick to the theme, and then I had my favorites that I just had. Usually, I just picked a trade book that related to a social studies or science unit that we were doing. Or like I would stick to an author. We used Stuart Little as an enrichment unit, and so I read the trilogy.

P Expansion on an author. So we have silent reading, we have oral reading, then we have the instructional material...and was that a whole [group]?

C Students sometimes did partner reading.

P Now did they all use the same book for the instructional material?

C Yes

P Alright. Now how do you justify that?

C Because it related to our theme.

P But did you have some kids who were unchallenged by that, while other kids were working beyond their capacity...ability level?

C Usually the book was scaled up. And so for those children for whom it was difficult for, we read together. We discussed it. We discussed the questions. Um, the readability maybe wasn't, but the theme was scaled up. Like Stone Fox. And most of our books were not third grade, on a third grade list. They tended to be more 4th and 5th. And just with the shared inquiry, that's how I extended, that's how I broadened the thinking. I wasn't real heavy into which character did what. With the LD kids, we'd discuss it.

P OK. And you have that in here...."certainly the readability wasn't, but we started with an easy one and got up to Castle in the Attic which is actually

more like a 6th grade book, so we go with the norm that way. But it's more the activity centers..." We'll get to that later. Well, let me read that. "...but it's more the activity centers that are enrichment centered more than the book. Just because we've put so much time and energy developing trade book themes; centered around a theme (2intrv2, L. 1416-1456)." So let's finish this and jump to that. We had the silent reading, the oral reading, the instructional material, were there any...you said independent reading. When was that done, and how were books chosen for that?

C That was pretty much student interest. I mean, I would encourage an interest. If somebody really liked Roald Dahl, James and the Giant Peach, I would say, are you aware that they've written these other books?

P How much time a day was devoted to independent reading?

C It varied, but I tried to do at least 15 minutes a day for that. And some of the students chose that as an independent activity, then. So time was provided or those kids who liked that (2intrv3, L. 826-946).

Celia clearly tended toward whole group reading with support and modifications given to students having difficulty with these grade-level and above grade-level books.

Support included small group teacher instruction, modified contracts, partner reading, and individual attention from the at-risk paraprofessional and student teachers.

Likewise, enrichment was provided to gifted and above average students through the use of higher-level questioning, including shared inquiry; further independent reading, and more demanding student contracts.

By 2:05, amidst rumbles of thunder, Celia told students to return to their seats for a "treat." Students who had completed their contracts earlier were going to re-enact a portion of the story. These students set up chairs in the open space in the back of the room while others moved to sit or bring their chairs closer to this space. At the end of the skit, Celia asked the students to explain what had occurred. Celia

then asked students some questions about the story before reading the conclusion aloud.

"What is an FBI agent?"

"Anthony, where is the border between Mexico and the USA?"

"How did they get the Mexican trader into the United States?"

At the end, Celia thanked the students and then talked about the epilogue. "Let's talk about questions we're still not sure about."

Students then offered questions. Celia said they would now conclude the story, and students found their books and returned to the sharing circle area. As students sat down, Celia called their names and said, "Tony is ready, Judy is ready...", and so on until all were seated and ready to listen. It was now 2:20, and Celia proceeded to read the conclusion of the story (.2ob3, L. 150-171).

Upon completing the story, Celia spent a few minutes chatting about the story with the class. She asked students what they liked best and what surprised them, which became the introduction to a creative writing assignment listed on their contracts. Celia explained this assignment and the options students could choose. They could do one assignment or both in this section.

As students settled back into their seats, one little boy in the cluster group next to me suddenly became visibly upset over something. He began to cry, and Celia stood next to him, talking softly and rubbing his back. He began to feel better, and with tears still sputtering down his face got out a box of animal cards. When Celia left, other students came up and asked him what was wrong. The little girl in his cooperative group that sat across from him shooed them away, telling them to leave him alone. She was very protective of him, and started looking at the animal cards with him.

Celia came over to share the students' Mexican travel brochures with me, and when I asked her what was wrong, she explained his distress over the turtles in the courtyard, his impulsivity and tentative ADD (Attention Deficit Disorder) diagnosis, and his family background. She also mentioned his sensitivity and love of animals. In a later interview, I asked her to elaborate on the role the young girl took in protecting him from others in the class. I was amazed by her concern and the level of cooperation that she established among her classmates. I wondered if she was a "mother hen" child who took this role readily, or if her actions were the results of the cooperative environment Celia established and rewarded in her room.

C Probably a little bit of both. I have to believe that in that point in the year, more group cohesiveness. I mean, it's a strong bond that they're rewarded for in working together.

P So when you see something like that, is there a reward that comes with that?

C We just move your symbol. Well, one group is the Juars, because they wanted to be Jupiter and Mars, and so a good example of a cooperative group, they just said, well, we'll blend them together and came up with the Juars. And I think their symbol is a little planet on the chart. So certainly, I would say, just move up on the chart. And I would tell the whole group this is why. I saw this kind of behavior going on. Certainly make them know that positiveness is the way to achieve (2intrv2, L. 631- 653).

Students worked on their creative writing assignment for several more minutes before moving on to science. Celia kept close to her schedule, and at 2:35 she reviewed science concepts on force by having students act out scenarios using force. During these scenes, another student entered the room and sat down quietly at the end of the first row. He was the ED student mainstreamed for science. Celia

acknowledged that science could not become too integrated, or she would be unable to accept his placement in her classroom. Hence, the tight daily schedule.

After several students shared their concepts of force, Celia went to the board and wrote the words force and work, and asked students to explain what they meant. Students supplied these responses :

force=pulls and pushes

work=moving force.

Celia called upon volunteers to demonstrate "work" before the class. One child tried to demonstrate work being done by pulling on the drawer of a file cabinet. It wouldn't open, and as he pulled harder and harder, Celia asked if he was doing work. Several students were called upon to explain this incident. They concluded this wasn't work.

Celia then mentioned that last night they'd been given an assignment to list examples of work they'd thought of during the course of the evening. Celia asked how many had thought of more than 20, 10, etc., and called upon Alison to share her list. Celia asked students if there was anything on her list that was not work or force, and if so, to explain why not. Another child shared, and since there was no discussion about her list, Celia thanked her for sharing. Others continued to share their lists, discussing whether or not work and force were involved in the activities (2ob3, L. 223-240).

At 3:00, Celia called off each student and named them either a one or a two.

One's were to illustrate and explain when force was being done, and two's were to do the same for work. She encouraged students to use examples that had not yet been shared. These examples would become part of a bulletin board. Students stayed in their cooperative groups, chatting about their ideas. Adam asked a good question, and Celia shared this with the class to clarify any similar questions others might have. As students worked, Celia continued to speak with students individually, helping them

arrive at their own answers through careful questioning. Students were reminded that they had about five minutes before first bell students needed to clean-up.

As students worked, Celia announced names of students with perfect attendance and gave them their certificates. She then announced that if students had brought a list (homework), Ed would deliver them a starburst candy. A child went to the board, wrote the homework, and the direction, "study spelling for test tomorrow." Students whose buses leave first in the afternoon (a.k.a. "first load students") were directed to write this in their notebooks.

Other students began stacking their chairs and several students came by to visit me at the computer. They liked watching how fast I could type, and as I typed their names, they became very silly, giggling away. I thought they seemed ready for fourth grade. The girls shared that they had a friendship club and a theme song to go with it. It went like this:

We are best friends, we'll be friends forever;

We'll never be apart, cause we'll always be together.

I had to wonder. Just third grade girls, or another example of a cooperative venture demonstrating care for one another?

What Differentiating was Occurring: Meeting the Needs of the Gifted

The method of determining differentiation at site 2 was the same as at site 1. Two initial protocols were used to capture the overall and individual types of differentiating occurring, and then thick description was used to record the actual classroom experience. These reports, and their accompanying interviews, were then transcribed and coded with emerging themes and codes as well as indicators of differentiation that were noted on the protocols. This allowed the researcher to determine how differentiation was used within the context of the teacher's thoughts, routines, curriculum, and pedagogy.

Like Titus, Celia favored a particular model to organize her thoughts about instruction. Her model was borrowed from the Accelerated Schools movement, a model developed for teaching at-risk learners. The fundamental belief of this model is to gear the curriculum up to raise the level expectations for all children. By following this model, Celia tended to do a lot of whole-class instruction, believing that all students would benefit.

Unlike Titus' development of sophisticated routines embedded within the whole-language model, Celia tended to add-on specific strategies of differentiation to the accelerated schools model. These strategies included higher-level questioning; flexible grouping; pre-testing in math and spelling and providing appropriate accommodations; use of learning centers; enrichment opportunities after school; and collaboration with the gifted resource teacher. Because these strategies were not embedded within larger routines, a much simpler matrix was used to document the

differentiation occurring. The skeletal matrix is included here to give the reader a visual representation of this chapter. The working copy contains penciled notes for each section, and is part of the site 2 methodological log.

Several themes relating to Celia's belief system emerged through the content analysis, but they explained why she differentiated instruction rather than how, and will be examined in the context of the narrative. In this section, I will portray how Celia utilized specific strategies under the headings of content, process, product, learning environment, and affect.

Site 2 Differentiation

Content	
Process	
Product	
Learning Environ.	
Affect	

Differentiating of Content

Celia's approach to organizing curriculum can best be described as an integrated approach to reading and language arts. Her subjects are still fairly discrete, reflecting her need for order, her colleagues' comfort level, and her own need to provide instruction in the content areas for mainstreamed special education students.

During Celia's Day, it was noted that most of the content she teaches comes from, "what we have to teach" (2intrv2, L. 1268). In asking Celia to elaborate on this, she explained that she and her fellow third grade teachers began developing units several years ago to correspond with the curriculum guides. The following passage indicates how Celia and her team chose content.

We just pretty much took the curriculum guide five years ago when we all started teaching together and pulled the themes out. The solar system, Canada, Mexico, simple machines, water cycle and weather...those were our biggies. And we planned field trips around them, we planned guest speakers...our fiesta. You know, we picked our big themes that we were all going to do together. And for that reason, some of our activities were cohesive because we knew we wanted all our children to come to this guest speaker with the same knowledge base. But then, [there were other units] we did plan together...the big one was continents. Each of us took a country and we planned activities around it. Now I must admit, though, in each of them you could still do what you wanted...we rotated the packet around. Like I developed Europe, and I found a trade book and any activities that could relate to that and I developed the whole unit and I formulated that into a packet, and then I rotated that around. That was the first unit that we did every year, so we had some big books, we had some independent trade book reading. We spent four days on each continent. That was probably more uniform than the others (2intrv3, L. 985-1026).

From this excerpt, one begins to sense some of the content limitations.

Teachers felt compelled to stick to the county curriculum guides, leading them to teach topics rather than themes, and they assigned a specific amount of time for

covering this content. This inhibited the use of in-depth study or following up on student interests in a topic. These teachers were in the initial stages of team building, however, and some of their decisions reflect what often happens when teachers of varying backgrounds work together to plan curriculum.

Within her own classroom, Celia was free to expand upon her grade levels decisions. To adjust the content for gifted learners, she enriched core concepts, collaborated with the gifted resource teacher, and used curriculum compacting.

Enrichment of Core Concepts/Topics

Within the core units, Celia differentiated material for her gifted students by gearing content up by her choice of reading material, enriching concepts with independent studies and learning centers, and tailoring assignments to meet student interests and talents.

- P Now within those units, how did you apply it to your classroom? How did you particularly differentiate that for those identified as gifted?
- C Probably, I...would be more comfortable with that with the solar system. That first unit, I must admit, that was the first month of school. So you're really getting to know the kids. The solar system...I differentiated it by...my kids were just...a lot of them were just more into creative writing, so we formed constellations and they had to write stories about them. I was the only class that did that. Other classes just didn't get from their students the responses that I did. The teachers just weren't as motivated to do that. Those who liked science...you know a lot of kids wanted to learn more about a particular planet so I'd bring encyclopedias in and they would research a particular planet and they would find a way to report that to the class (2intrv3, L. 1028-1062).

Content flowed from basic curriculum concepts to addressing particular student interests. Books used to teach basic concepts were at or above grade level, with an

emphasis on students furthering their own knowledge with independent reading and independent studies. An example of a suggested study for the Medieval Unit was the following:

Write a report on castles. Find information for your report in the library. Tell why and when castles were built. Who lived in them? Describe four or five special features of castles and why they were needed (moats, drawbridges, etc.) 2ob4, L. 105-111).

This assignment integrated reading, language arts, and the content area, and was typical of those assignments used to enrich and extend core curriculum. While this assignment provided students with an opportunity to explore a topic most third graders find interesting, it had several pitfalls. Students were basically on their own to conduct the research, and no system was provided to guide the students through the process or product. Any learning achieved was left basically up to the student.

An interest center on castles with a variety of print and non-print materials, combined with specific task cards to help students conduct an independent study, would be more enriching. In addition, students could produce some interesting products on this topic. Measuring these products against a rubric would further guide and enhance the quality of the learning experience. Thus, while Celia was cognizant of the need to enrich her units, her method of providing students with independent studies did not necessarily lead to a quality experience.

Collaboration with the Resource Teacher

In addition to planning with team members, Celia collaborated with the gifted resource teacher to further develop content more appropriate for gifted learners.

During one of my observations, the resource teacher dropped off materials from the

resource center while delivering a packet of information for screening another student.

By working together, the classroom and resource teachers provided appropriate content for Allison, the child identified as gifted in language arts.

C Carol would help me to develop an independent study...that could be done either in lieu of an assignment that they clearly didn't need to work on because they had mastery of that skill...Allison really liked mysteries...so we just sort of introduced her to mystery novels and had her writing those stories.

P And that would be in lieu of what?

C Just other, like language assignment that she wouldn't need to do. You know, like subject/predicate...that kind of thing. She already knew that.

P Instead of skill work.

C Right. She really liked nature, too, and factual information. She liked my wildlife treasury. And Jared, remember little Jared that came in? They're buddies. They did a lot with that. And at recess time they'd go outside; they had this little booklet that they wrote all their stories in. They were fantasy stories, but based on facts that they had gathered from that treasury. And just always provided time for them to share them (2intrv3, L. 68-114).

Celia addressed other individual needs of identified gifted students by furthering her relationship with the resource teacher. For example, Adam was identified as gifted in math. To meet his needs, the two teachers worked together to set up an independent study using Lego/Logo to teach basic programming skills. Celia explained the accommodations she made to provide Adam with time and support for this work.

He works on that mornings when he gets in here, and that's when I will substitute that for a drill/practice that somebody else might have him do. "Adam, I know you can do this, so come back when...this is your assignment for the morning. And this is a supplement for that. So he'll work on that for me. Free time, after he gets done. He's someone who works quickly. So that's anytime that he has free-time. He has that option. It doesn't have to be

something that he has to do. But he knows that it's back here for him. Sort of a center for him to work on that (2intrv1, L. 477-461).

She also explained Carol's role in this project.

And then he works with her [Carol] once a week after our Monday group time. They go over what he has done in the week, and she gives him a new assignment for the following week (2intrv2, L. 1132-1142).

Carol pulled Adam independently and taught him the basic concepts of programming in the library. Celia, in turn, created a space in the classroom where Adam could continue his work in lieu of regular math activities.

Celia's ability to work with others to enact change at times went beyond the classroom walls. Both she and Carol felt discouraged that math enrichment was not provided to other students in other grades. Together, they formed a math club which met for an hour after school on Mondays. They used a kit, "Mathematical Olympiads for Elementary Schools," a program that focused on problem solving skills.

Participating schools received a weekly packet of problems among other materials.

Each problem has a time limit. An example of a problem is,

Time is three minutes.

When I open my Math book, two pages face me. If the sum of the two page numbers is 317, what is the number of the very next page? (Appendix B).

The two teachers taught problem solving skills to students, and motivated them to succeed through the weekly competitions. Celia states how students were selected.

It was pretty much whoever wanted to come, but Carol and I encouraged certain students. The gifted math students knew who they were, and they pretty much put themselves in the club for that reason (2intrv3, L. 1321-1328).

By working closely with the gifted resource teacher, Celia enriched and accelerated the curriculum materials in the areas of strength for her identified gifted students.

Since textbooks were not used on this level, and assignments were open-ended and adapted to students interests and abilities, curriculum compacting was not done in the content areas. However, this strategy was used in spelling and math.

Curriculum compacting

Curriculum compacting refers to pre-testing students on material, and then designing instruction that allows for an accelerated learning rate of material needed to be covered (Renzulli & Reis, 1985). Early in our study, Celia mentioned to me that no one had sat down and told her how to pre-test or compact curriculum. I asked her how she got started with this strategy.

P ...how did you decide to pre-test?

C I felt, most of it, well I should say all of it...if a child said, well I know how to do this, or they could demonstrate that for me...that kind of happened early on, so for that reason. Or if a parent said...you know, they pretty much want to know the third grade curriculum, and say, oh, well, she knows how to do all this.

P So you were basically problem-solving.

C Yes (2intrv3, L. 147-167).

Once she began pre-testing, Celia sought help from the gifted resource teacher and began to use this strategy in a planned manner. She pre-tested in both spelling and math, designing individual packets for students to work on in lieu of classroom assignments.

P What subjects do you pre-test?

C Math and spelling at this point.

P OK, and what cut-off do you use? How do you do it, how often do you do it?

- C Spelling's weekly, as soon as, if they pass the pre-test. And some kids study it over the week-end, but I don't care.
- P Now by pass, what do you mean?
- C With the pre-test Monday, that they've mastered all the words.
- P All of them. So if they miss one, do they not go on?
- C Yes, I give it to them. I mean, it would depend on the child. Those who know them, and those who really studied. I mean, I know the difference after working with these kids. Because, you know, the spelling is carried over. But those kids like Allison, who would miss one because she...
- P OK, so you just don't worry about that.
- C Then they're just afforded a whole new list of challenge words. And math is just every unit...
- P Let's go to math, then. You said you pre-tested at the beginning of the chapter. Explain that.
- C And I just give a book test. I don't like the test, but that's one way I do use it, for pre-testing purposes. And for that, I just skim. Usually they have a whole row of the same type, and if they missed one and I can see that the process was mastered, I don't do...usually, some of the problem solving they've done wrong, but that's where then that group works, anyway, so...and what I do is just go through that book and some other books I've bought, and then Carol, our resource teacher, and say, "What can I do with these kids?" A lot of that's done independently. But I do meet with them daily just to see where they are. But the majority of the time is spent with the kids that need to learn the concept. So, and it's a different group each time. And I use these folders; day1, day2, day3; I mean it's a lot of organizing on my part, but again...[it's for the students] (2intrv2, L. 674-795).

Celia states that her pre-testing in math relates mainly to the skill areas. She did not pre-test the measurement unit because she felt this material was fairly abstract in nature and could be considered an enrichment unit in and of itself.

- P Was a pre-test given on liquid measurement?

C No, I don't think so.

P OK...

C I don't think I pre-tested on liquid measurement, just because we expand so much on what knowledge base they already had. And I guess I just felt that you could do so much enrichment on that unit anyways. It wasn't a basic skills...multiplication, division...

P So then the pre-testing was done for more basic skills.

C Yes, whereas with measurement, we were going to do so much application of that unit. Throughout the year, too...Basically, I think measurement is an enrichment unit, because there's so much of it that is abstract. You can't show them (2intrv3, L. 452-496).

Curriculum compacting was used primarily for skill work, and provisions for accommodating students who demonstrated mastery of basic skills were done in conjunction with the help of the gifted resource teacher. These provisions included enrichment work, independent study, and an after-school math club.

For Celia, content originated in the division curriculum guides for her grade level. She and her grade-level team designed integrated units together. Celia adjusted whole group assignments to meet student interests and needs, and provided acceleration and enrichment for identified gifted learners through enrichment, collaborating with the gifted resource teacher, and curriculum compacting.

Celia's role with regard to the content she taught was that of a collaborator with others. She accepted her grade-levels decision to implement the division developed curriculum. Within her classroom, minor adjustments were made to meet the abilities and interests of her class as a whole. Celia collaborated with the gifted resource teacher to provide enrichment and acceleration for identified gifted students.

Her ability to be a team player allowed her to make changes while building a support base for her instructional goals of furthering integrated instruction, promoting the use of higher-level thinking skills, and providing extended opportunities for gifted learners.

Differentiation of Process

Celia utilized both planned and informal strategies to differentiate process skills within her classroom. Planned strategies included the use of shared inquiry, Talents Unlimited, and a focus on problem-solving, while informal methods included the use of higher-level thinking skills, self-directed learning, open-ended questions and activities, and an emphasis on metacognition.

Shared Inquiry

Celia used shared inquiry as part of her whole-group reading instruction. She attended three-hours of training for this strategy within the county as part of the requirements to teach the cluster-grouped gifted students in the regular classroom. Shared inquiry is an interpretive process in which the reader must strive to understand, through reading and group discussion, what an author is trying to say. Content for shared inquiry came from the trade book that corresponded to the unit being studied. Usually, all students participated in the shared inquiry discussion at the same time. At times, she used a parent volunteer to conduct shared inquiry with part of the class.

When I could get a parent volunteer, sometimes I'd just split the class in half to do shared inquiry, because I'd want to hear from everybody, and it's just too hard in a whole group (2intrv3, L. 1232-1239).

During one observation, students were preparing to do shared inquiry with the book,

Stone Fox.

Students formed a circle with their chairs. A chart next to Celia had, "Rules for Shared Inquiry" posted (2oba, L. 14-19).

Students arrived at the circle with answers to questions for discussion on notebook paper. They had formulated these the day before as part of their reading assignment.

These questions included the following:

1. Why did Willy feel "ten feet tall" after he entered the race?
2. Why is Willy excited about the route planned for the race?
3. Why is Stone Fox a good name for the Indian?
4. Why did Stone Fox refuse to speak to the white men (Zoba, handout)?

Students participated in the discussion well, and clearly understood the rules to shared inquiry. Now and then, however, these would be reviewed as students became excited.

"Remember our rules. If you do choose to participate in the discussion, you need to raise your hand." Celia used a seating chart and recorded responses at this point. She re-stated students' responses, then called on another student. He responded, and Celia stated, "So, you're agreeing with what Blake said?" She recorded this, then called upon another student. Students did a good job of agreeing and/or disagreeing with one another (Zoba, notes on handout).

Shared inquiry was used as an alternative to contracts and paper tasks. Students were taught the basics of the shared inquiry process, and Celia became the facilitator for group discussion. She encouraged students to listen to one another and to agree or disagree openly.

Talents Unlimited

Talents Unlimited refers to a program aimed at developing effective thinking skills. Areas of thinking included in this model are productive thinking, decision making, planning forecasting, communication, and academic thinking. At one time, the Talents Unlimited Model formed one of the mainstays of the gifted and talented

program in this division. Teachers working with cluster grouped gifted students are still required to take the three hour staff development seminar on this model.

Noting that Celia, too, had the components of Talents Unlimited on a poster on her wall, I asked her if and how she used this model. Her answer reflects her need to adapt techniques to make learning meaningful for herself and her students.

I didn't use it the way the county [originally presented it]. I often did the brainstorming...the many varied and unusual things....finding out ways...for example, that math assignment [you saw me teach]. "Go home and find the many different things you measured in meters and centimeters." Did a lot of the "what ifs." When we were studying the sun and the stars, "What if we didn't have the sun?" And certainly the planning. The format was kind outdated in my opinion...It was a little too structured...I did a lot of science experiments, made every child do a science experiment. So we would kind of do it that way. What is it I want to find out, what are the steps that I need, what are the materials I need. What did I discover? Kids had a hard time, and the part that bothered me was, "What could go wrong?" I just kind of felt like; I don't want to think about that ahead of time. I just want to do that and learn from that. And they never got that part, and so I guess through trial and error, I just took that part out. It didn't appeal to me, and maybe that's why it didn't appeal to the students. Maybe I just didn't model it that well. I don't know! And I'll take responsibility for that! But I'm a three (4-MAT learning style), and I "do," and I'll learn from my mistakes. I'm too positive to think, "What are the negatives (2intrv3, L. 773-815)?"

During one of my observations, Celia used the Talents model to help students organize their thoughts for a game they were to make to correspond with the book, Stone Fox.

For the rest of the morning, you are to make a Stone Fox math game with a partner. You and your partner are going to plan this. First, you need to decide what you're going to do. The game needs to use multiplication. You need to list your materials. Boards have already been cut from matboard, and blank flashcards are available. You need to list your process in creating the game. What to do first, second, and third. You also need to determine how you can get other materials you might need. A ditto had been prepared to help students organize their planning stages. A vertical line was drawn down the center, with the words "What" and "things" list on opposite sides of the line (2oba, L. 102-126).

In this whole-class activity, Celia used the Talents model to help her students think for themselves as they worked on a fairly open-ended activity. Students readily used the model to help organize themselves, with some groups delegating specific tasks to their members.

I visited Allison and Jared as they worked on their game. Allison looked up at me and said, "I do the thinking, he does the doing (Zoba, tape)!"

The Talents model in this activity provided structure to help students become successful problem-solvers.

Focus on Problem-Solving

Teaching problem-solving skills is Celia's forte. Throughout the day, as students worked on assignments and interacted with one another, the focus was on teaching them to solve problems. Celia herself models this, solving classroom dilemmas with simple solutions, such as the "sharebag." Her focus on problem solving stems from both her undergraduate experience and her own learning style.

My teaching math professor said if the kids can't problem solve, they're not doing math. And if nothing else stuck so much that year, that probably had the most impact. And from taking that class to life skills, I mean if they can't problem solve, they can't do math. It's all from my type three learning style (4-MAT terminology); the practical; I'm sure it is! But if they can't solve a problem, what good am I teaching them (2intrv2, L. 989-1007)?

The skills of problem-solving are taught both in isolation and within the context of other subjects. Noted earlier was a display in her classroom listing the steps to problem solving:

Steps in problem solving hung with a detective and magnifying glasses:

1. Understand the problem;
2. Make a plan;
3. Use the plan;

4. Answer and check (2oba, L. 36-41).

This plan is implemented consistently as part of Celia's verbal repertoire when teaching students.

At times, students practice basic math problem solving as a warm up activity or reinforcement of concepts previously taught.

Students worked on a variety of tasks as they entered the room in spurts. One group of five was working on a magnet game, having completed a math problem-solving chart that was hanging on the board. The chart had six numbers scattered in a box: 79, 45, 16, 33, 80. Students were to respond to eleven questions about these. Some included:

1. The sum of the digits is 8.
2. A 1 is in the one's place.
3. The one's digit is one more than the 10's digit.
4. The difference between the digits is 2.
5. The number is greater than 10 and less than 20.
6. The difference between the digits is 5, etc. (2ob4, L. 5-25).

These "game" type activities are also used during the math instructional block to again reinforce skills. As Celia began to work with small groups of children on a cooking experience, others were instructed to play a game with Anthony. A series of four numbers were posted on the board, and students were instructed to mix the numbers in any way to come up with 24. Each group was given several cards to work on and sheets of blank pages to record their responses.

Other math instruction demonstrates how Celia models problem solving strategies to help students develop multiple techniques.

Celia gave students some information. "2 quarts = 1 half gallon. So how many quarts = 1 gallon?" Students wanted to continue to estimate. Celia told them estimating was good, but there was a way to solve this problem using the information given. Students had trouble with this. Celia again illustrated on the board, this time using a number sentence method to solve:

$$\begin{array}{r}
 2 \text{ quarts} = 1/2 \text{ gal.} \\
 +2 \text{ quarts} = 1/2 \text{ gal.} \\
 \hline
 4 \text{ quarts} = 1 \text{ gal. (2ob1, L. 151-164).}
 \end{array}$$

During this same lesson, Celia asked students to apply problem-solving skills to a daily-living situation.

"Let's suppose you don't have a quart container. How could you come up with a quart?" Celia then gave an example and a student shared a possible solution (2ob1, L. 173-176).

Problem solving in daily living situations is expected for students in Celia's classroom. Students work in base groups, and are expected to determine what they need for projects, and how to procure these materials themselves. They are expected to solve their own difficulties, and are rewarded for their efforts by achieving points toward a shared reward. Students learn to work together through the problem-solving experience.

Metacognition

Metacognition is used regularly with students as they work to solve problems. As students shared solutions, Celia routinely asked them, "How did you solve that?" Some examples follow:

One child shared how many teaspoons were in a quart. Celia again asked him how he solved this. She stood up and explained (2ob2, L. 200-203).

Later, in this same lesson, a group of students shared their solution.

Celia, as usual asked them to explain their solutions. Students shared that one group already stated that there were 192 teaspoons in 1/4 of a gallon, so they multiplied this by four to arrive at their solution. Students were complimented with "good thinking (2ob2, 251-262)."

In the beginning of a measurement lesson, students shared items they had weighed at home. Celia asked one student to explain to the class the procedure she used to weigh these items. The student explained how she used the scale (2ob3, L. 104-113).

By using metacognition, Celia encourages students to articulate how they solve problems and capitalizes upon students' ability to teach one another. She also reinforces her belief to students that the process of learning to solve problems is more important than the correct answer. Students are encouraged to take risks.

Open-Ended Questions and Activities/Higher-Level Thinking Skills

Open-ended questions and higher level thinking skills are routinely used throughout the day, particularly during the language arts block. Celia acknowledges that she is the driving force behind their use in their grade level planning sessions, and at times she becomes frustrated because others on her team do not appear to possess the will or skill to incorporate these consistently.

And a lot of it, some of it provides you with higher level thinking questions. When we sit down as a grade level, that's always my input. And often they'll change their questioning because it doesn't suit....they're like, "My kids don't think like that. I won't get those responses (2intrv1, L. 259-266)."

These open-ended questions and higher-level thinking skills are used to begin discussions, to probe for further information, and as assignments for students.

At the beginning of a handwriting exercise, Celia showed students several different letter combinations written in cursive: be, vi, op, and wo. She then asked the class what these letters had in common. After four or five students responded, she said that yes, as Dorothy mentioned, all of these letters are connected at the middle line. By using an inductive, open-ended question, all students became interested in the activity and analyzed the data for a possible solution.

Sometimes, an open-ended question is posed to students at the beginning of a study to assess students' knowledge. After conducting several lessons on measurement, Celia asked students to work in their base groups to brainstorm answers to a question. Her question was, "Knowing what you know, I want everyone to give suggestions to their recorder on all the different ways you could make a quart (2ob1,

L. 169-172). Groups shared their responses after approximately ten minutes had passed.

As part of her shared inquiry format, Celia gives students a list of four to six interpretive questions to respond to before coming to group. Assignments relating to the chapter or story sometimes follow, and these too, are open-ended. Examples of these are located in Appendix B, "Mystery of the Plumed Serpent."

Other student assignments are posted on charts throughout the room, reflecting the unit being studied. These include the timeline assignment, suggestions for writing assignments, and independent study options. These will be addressed under Products.

Differentiation of Products

Products in Celia's room related to the theme being studied, and were most often done to culminate a unit. For example, students and teachers in third grade planned a Mexican Fiesta for the end of the unit celebration. Preparations included building pinatas, making flags and costumes, and cooking Mexican foods. Students performed skits demonstrating their knowledge of Mexico before an audience of peers and parents. To evaluate students' knowledge, Celia gave them all the same open-ended assignment: to design a travel brochure of Mexico. The brochure needed to include a map and geographical description, weather information, historical facts and places, and a depiction of the country's culture. Students were given a wide variety of resources to consult as they worked on these.

Games were sometimes used as a product, too. Here again, all students in the class were given the same open-ended assignment, to build a Stone Fox game. This was a math game that integrated students' current math skills with characteristics of the book being read. Students were assigned partners, with gifted students working together (2oba, L. 112-113).

Students appeared to feel comfortable to suggest extensions of learning that were not assigned. During one observation, a group of students asked if they could perform part of the story for other students.

These students set up chairs in the open space in the back of the room while others moved to sit or bring their chairs closer to this space. At the end of the skit, Celia asked the students to explain what had been done (2ob3, L. 146-151).

I noted several of these impromptu presentations as I observed Celia's class, and I asked her how she scheduled time for students to present these. Her response indicated the use of scheduled, flexible blocks of time used for student sharing.

...whenever they complete a project, they just come to me and tell me and then we afford time before...we have to have social studies and science time sort of set because of the mainstreaming, so prior to that when I have an informal snack time, we'll come back and watch a skit, a play, that the children have done. So they know that during that time...(to) come to the back (2intrv2, L. 347-360).

Suggested products relating to reading included news bulletins, cartoons, skits, comic strips, puppet shows, and book mobiles. These often demonstrated transformations of learning, and were shared with both peers and adults. As in Titus' classroom, however, these were usually differentiated by the complexity of resources students chose to complete their research for the product, or the partners they chose as they worked. Rubrics or other evaluation tools were not used to guide or assess the products.

Differentiation of Learning Environment

Celia's greatest strength is her consistency. Instructional time is not lost to establish classroom management. Her polished routines and matter-of-fact demeanor create an atmosphere of respect that is quiet and comforting. There exists an incredible sense of flow to her day, and underlying this flow are elements of mutual respect being modeled by teacher and students alike. Within this environment, modifications made to allow gifted students to maximize their potential include a responsive atmosphere, flexible grouping arrangements, student choice, learning centers, and the encouragement of divergent thinking.

Responsive Atmosphere

In "Celia's Day," I described the cooperative learning system Celia developed as a vehicle to convey her expectations to her students. Students were rewarded as a group for demonstrating care and concern for one another. Celia was consistent in rewarding students for positive behavior because these are behaviors she deems, "life skills."

- P And so tell me your rationale behind using this classroom technique.
 C I guess life skills. If I had a choice of something these children had to leave with, it would be the ability to work with others. Of mixed diversity, teaching patience (2intrv2, L. 585).

Celia credits her attendance at workshops and reading journal articles for the use of this strategy in her classroom.

I attended some workshops. I went to a really neat workshop. It was cooperative learning and math, but I came out with ways you could utilize all of those strategies. And cooperative learning is not just putting children in groups. It's teaching them to solve problems together, listening to each other,

and often you have to force that with some of the math problem-solving with matrix grids. Each child was given a clue, so you couldn't solve that problem unless each child shared...nobody was able to pass their clue off to anybody else. They had their input. And you have to teach that (2intrv2, L. 575-598).

Setting up structures to allow students to learn to listen to one another forms the mainstay of Celia's learning environment.

Flexible Grouping Arrangements

In addition to promoting a cooperative atmosphere, Celia uses flexible grouping arrangements strategically to pair students for specific projects. She uses a "partner chart" to organize her groupings, and changes them according to the assignment to reflect student needs.

And I've experimented. Somebody who I think for this type of writing assignment, might be better off with this one. So, it really depends on what we're doing. But I purposely try and put two kids that I think will spark each other...But I don't believe in just making them a helper...pulling another one along (2intrv1, L. 673-687).

I observed two children, Jared and Allison, often working together in the classroom.

As they worked on their Stone Fox math game, I moved in to hear their dialogue.

They quickly got quiet, but Allison turned to me and said, "I do the thinking, he does the work!" They had worked out quite a partnership, and easily remained on task.

At times, students also work individually on projects relating to their area of giftedness. Adam, for example, was identified as gifted in math, and was working on an independent study using Lego/Logo. I asked Celia if the others resented this, and her response indicates her belief in respecting the needs of others while promoting student responsibility.

- P How has he felt, to do something like that, that the other children aren't doing?
- C Oh, he likes it. It's a compliment to him. Because he's also very...he's a good citizen, it's certainly an earned thing. And he respects that. It's a respect thing. You have shown me that you are not only capable academically, but that you are responsible enough to use something like that (2intrv1, L. 488-495).

Celia models and promotes respect for individual differences throughout her day.

Students are admonished to "listen to each other and not repeat, please..." when giving responses, and support help is openly provided to the mainstreamed LD and ED students. Allowing gifted students to accel on independent projects is just another aspect of respect she instills in her students. According to Celia, students do not appear to view these opportunities as "special treatment" because the needs of all students are addressed.

Student Choice

Student choice is apparent in the learning environment and through student contracts. While reading a story orally to the class, some sat on the floor while others lay down or sat in chairs. Students choose what to bring in for the "share bag," and are given opportunities to share homework orally. Many contract items provide students with choices through open-ended assignments and a variety of product options. In addition, students often choose partners for projects, and may opt to work alone at times. Respect for individual choice is the foundation block, and virtually any student preference that can be defended is honored in this classroom.

To further develop student responsibility for learning, a variety of learning centers were established in the classroom. These included one for reading, research, writing, science, and social studies. I asked Celia to elaborate on her use of centers.

- P When did the students do these and how often were they changed?
- C Pretty much every unit. I would pick unit themes that went along with their social studies and science unit. Our afternoon...that's all we did. Our afternoon was clumped just doing science, social studies, and language arts.
- P So were they assigned one of these to do? Were these on a contract to do? How was this done?
- C I would start out assigned, because I don't give a lot of questions for comprehension. It was like more shared inquiry based. We discussed two, three questions, so that they had the flexibility to choose those things. If there were some that I really liked for them to do, you know like I would...at one time I had up there a travel brochure. I made sure everyone did one for Mexico because that was going to be one of my final forms of assessment on their knowledge of Mexico. So it would start out sort of self-initiated, but then I would sort of pick out two or three that I would require them to do.
- P So they would basically explore them and then center in on the ones they wanted.
- C Right (2intrv3, L. 585-624).

Centers were used to help students explore facets of a culture or topic being studied. Students were given a fair amount of leeway initially, but then were expected to complete several required activities independently to demonstrate mastery and understanding. All the centers were set up to expand upon the unit being studied. For example, during their studies of Canada, students could read more about Canada on a variety of levels at the reading center, research Canadian animals at the science center (again, using a variety of materials), or make a map of a particular part of Canada at

the social studies center. Each center had a contract, with varying levels of complexity. Gifted students were expected to complete the "bonus" or "extra credit" section, whereas this was optional for other students.

Encourage Divergent Thinking

As mentioned earlier, Celia used the Talents Unlimited model to develop students thinking skills, including divergent thinking. Her lessons often began with students sharing the results of a homework assignment that utilized divergent thinking skills (find objects you can weigh; list different uses for a quart container, etc.) and at times she used a divergent activity to begin a lesson (How are these letters alike?). Divergent thinking was used as a follow-up to a measurement lesson (List ways to get one quart) and students were encouraged to share divergent responses with one another ("This is a thinking game. When you get an answer, you can share it with your group [2ob1, L. 246]). Divergent thinking was encouraged and honored as respect for individual thinking.

Respect for the individual formed the basis of Celia's learning environment. She established her expectations with a cooperative model of shared student responsibility. Celia modeled respect in her interactions with students and colleagues, and students were consistently rewarded for positive behavior. This formed the basis for her ability to address individual needs in the classroom.

Differentiation of Affect

With the structures of learning environment secured, affect flowed as a sense of serenity in this classroom. Students collaborated and worked in harmony while their teacher quietly presented lessons, regrouped students, and facilitated their learning through questioning and enrichment opportunities. Two affective strategies that were consistently cultivated were the development of a positive self-concept and leadership skills.

Positive self-concepts were maintained through Celia's ability to develop students' awareness of expectations. Two techniques she used regularly were to re-direct students when off-task rather than reacting to misbehavior, and to clearly define the parameters of a lesson so that students could work successfully. In the former instance, Celia established a consistent routine that students understood. They wanted their group to succeed, and worked together to achieve success. Individual students were usually brought to task by the group, thus freeing Celia of disciplinary action. In the rare instances when a number of students became off-task, Celia responded by ending the activity and re-directing students to something new. She read their frustrations and responded with an appropriate change rather than competing for their attention. An example of this was the statement she made during her cooking lesson, "For whatever reason, I am beginning to get tattling from children I don't usually hear from. Let's end this activity and get ready for reading." This allowed for a natural break, with both students and teacher emerging as "winners."

Celia's second strategy for developing positive self-concepts involved defining lessons so that all could be successful. Students were given support through specific instructions, assigned partners, or small group or individual assistance. Students basically were not given the opportunity to fail. If they did, however, Celia addresses it by hanging it on her "re-do" clip.

C I have high expectations for all of my children, and I won't let any of them, if they slip, we sit down, and we do it all over again. Together. We talk about it first.

P And what do you do with the first one?

C We staple it together. So that the parents see. And I write on it, "Re-did." And this clip up here is everything that I won't accept. Because I don't just write lessons. On the board here are metal clips. Everyone comes in the morning and sees, and they check that...

P I see! And their work is hanging up on that. And that means that's a do-over. And how do you grade it then?

C With my low-achieving kids, if it's a U, and they've done it over, and have proven to me that they've...I will go middle of the road then. I'll do something like O/U then, or then in the middle, there's the S then. I want them to succeed.

P And how about a top student who has decided to sort of underachieve for a day or two?

C That child, they would not get...they'd get the S, too, For that particular thing you did satisfactory work. I wouldn't give them...I'd give them the time to re-achieve, also. And because, hey, we're all entitled to our off day. But it would be a different approach, as far as a disappointment. At this point, let's talk about this. Why didn't you...we're very honest. In other words, you're never going to get away with it...I have high expectations, and I have parents who say that. Sometimes, I'm not sure how they're saying it, that I have high expectations for every child in this class. And I don't ever compromise it. I really don't. For them, or for myself. So, they know they're in for a lot of work when they come in here, but hopefully it's challenging work.

All students in Celia's room were expected to succeed, and mechanisms were established to help them do so. This expectation said, "I believe in you," and helped to develop a positive self-concept within the student.

In the same way that Celia let students know she believed in them, she structured opportunities for them to learn to believe in themselves. These opportunities for leadership included several sharing times, with the importance of listening to one another a top priority. Sharing times included a planned routine when students could share personal items via the "share bag," opportunities to share homework responses at the beginning of most lessons, and the sharing of responses during lessons. During these lessons, students were often called to write on the board or overhead projector. Once coming forward, students then selected the next student to respond, again promoting leadership within the classroom.

By creating a learning environment that advocated respect in all decision-making, Celia gave credence to developing the affect within her students. They understood her expectations and belief in them, and responded to their failures by taking a second chance. In addition, they learned to listen to one another and when they spoke, their words were received with quiet respect. Care and concern for one another were lessons learned by all.

Celia's Narrative

The purpose of this narrative is to answer the question, "What enables this teacher to differentiate instruction for gifted learners in the regular classroom when the majority of teachers do not?" In searching for answers, initial codes relating to differentiating (both those established in the observation protocol and emergent codes) were sorted for themes and patterns. These patterns were modified as the study progressed, checked against new data and leads, and then reviewed with the respondent for confirmation. As in site 1, several broad themes emerged as critical factors that enabled the teacher to develop instruction appropriate for gifted learners. These factors are the teacher's belief system, her personal characteristics, her knowledge of pedagogy, and her professional growth and reflection on teaching.

Unlike Titus, Celia tended to give short, direct responses when asked to elaborate on the "why" aspects of her teaching. In comparison to the previous narrative, her responses lack depth, and it would be easy to assume this illustrates a lack of experience and knowledge. To some extent this is true. However, as the researcher working with her, I tend to view these responses more in line with her "cut to the chase" personality, and her desire to move quickly through the interviews. These possibilities and their effect on the study will be explored more fully in both the cross-case analysis and the discussion of the study.

Beliefs

Two beliefs, one affective and one cognitive, form the core of Celia's personal philosophy as a teacher and impact the decisions she makes in her classroom. They are:

1. Respect one another; and,
2. Children should be problem solvers.

These two beliefs were central to what Celia felt was important in her role as a teacher as well as what and how she taught her students. They shaped the techniques and strategies she chose to use in her classroom, and influenced her definition of giftedness and how she chose to meet the needs of gifted learners. These two beliefs are rooted in her biographical background, her pre-service education, and her personal learning style.

Belief 1: Respect one another

Celia states that the main goal of her teaching is to give students "life skills." Included in these life skills is the ability to work together.

"If I had a choice of something these children had to leave with, it would be the ability to work with others. Of mixed diversity; teaching patience" (2intrv2, L. 603-607).

To implement this goal, Celia established several sophisticated routines to give students practice and feedback in working in small, mixed group situations. These routines included grouping students into cooperative base groups and teaching students to listen to one another through sharing time, sharing responses, and shared inquiry. By grouping students into cooperative base groups, and then providing them with positive rewards when successful, she established a controlled atmosphere that enabled

her to concentrate on teaching. Rather than reacting to misbehavior, she interpreted their signals and adjusted instruction.

What impressed me most was the tight management of her students that appeared effortless. She showed a high respect for students by keeping her voice low at all times, never threatening them, and she read their signals easily. They in turn wanted to please her, and did so effortlessly. 'I'm getting a lot of complaints from students I usually don't hear from. It must be time for us to move to something different.' She interpreted their misbehavior rather than dealing with it directly. This gave her lessons flow and never set up an 'I win, you lose' scenario (Method2.log).

Celia validates this belief as a curriculum concern, stating that, "...there's a lot of life skills taught in third grade, too...much emphasis is taught on responsibility and making choices and decision making (2intrv1, L. 1007-1010). Beneath Celia's definition of life skills lurks a deeper belief system: respect for the individual. She believes this core value stems from her family.

P What would you say would be the basis for that belief or system?

C I guess, again, family. We don't judge people. We form our own opinions...I guess it was just a more democratic family...and I think just with that, you don't assume how most people want to be. You respect that they're a person, and some things just happen to put them in that position. We don't judge them for that reason. This is hard. I mean, I guess most of it is my upbringing.

Respect was emphasized during sharing time as students were instructed, "Let's not repeat, please. Listen to your classmates" (2ob1, L. 213). During a post-observation interview that discussed shared inquiry, I noted that students had, in fact, listened very attentively to their classmates. Celia took credit for this, responding that "...disagreeing with somebody is not disrespectful" (2intrv1, L. 792-793).

Celia's desire to meet the needs of her diverse learners is an outgrowth of her belief in respecting the needs of her students, and their parents.

P So, what made you decide to do this (differentiate curriculum)?

C Because that's what the children need. To me, the thought of holding them back is just...is overwhelming to me.

P O.K., and how did you come up with that...I mean, why do you feel comfortable with it. Is it the result of education, experience, both, personal?

C Some. I think children's responses, though. It would be what drives me into doing most of this. It's listen to what the kids are saying. If they already know how to do this, why should they do it? I mean, to me that makes perfect sense.

P And do they say that?

C Yeah, and I guess some of that is probably my style. The kids are very comfortable telling me how they feel.

Celia acknowledged that her initial attempts at individualizing and differentiating instruction were a result of responding to student needs. By organizing several macro routines that conveyed respect, Celia created a learning environment that acknowledged and addressed students' needs. Unfortunately, Celia at times equates differentiated assignments for a small group or individual students as a reward. At one point, a group of students left the room while others remained to work on spelling.

So, they're rewarded because they knew the words. And the others don't mind that, because they know it was based on...they deserved it. They earned that right to be out of the room (2intrv2, L. 762-766).

Equating acceleration or enrichment activities with a "reward" was noted again when Celia explained a Logo center that she and the resource teacher established for a child

identified as gifted in math. She responded to a question I posed on how the student felt about having an independent study that was obvious to the rest of the class.

Oh, he likes it. It's a compliment to him. Because he's also very...he's a good citizen, it's certainly an earned thing. And he respects that. It's a respect thing. You have shown me that you are not only capable academically, but that you are responsible enough to use something like that (2intrv1, L. 488-495).

While this response corroborates that Celia individualizes (and at times differentiates instruction) out of respect for students' needs, it raises concerns about who gets individualization or differentiation. Would a gifted underachieving student with behavior difficulties be granted the same respect? Are only students who are "good" likely to be labeled gifted?

Finally, respect as a guiding principle was noted in the relationships Celia cultivated with her colleagues to further promote differentiated instruction within her room, on her grade level, and as a school. Celia worked with the gifted resource teacher to develop independent studies for two of her students, and also collaborated with her to do an after-school math club for students excelling in this area. As grade level chair, she steered her team toward incorporating higher-level thinking skills, advanced trade books, and open-ended assignments to enrich and expand the curriculum. Despite their resistance toward accepting these ideas at times, Celia reminisced that her third grade team did work well together.

I must admit, moving up to fourth grade next year, and meeting with that grade level, I have decided that my grade level really did work well together! It did a lot together. I hadn't realized [this]. I had assumed everybody was doing it...naive me (2intrv2, L. 1156-1162)!

I probed to find out why she felt her team worked well together, despite their resistance to following her lead in incorporating more strategies appropriate for gifted learners into the curriculum. Her response indicates the group's past in working through common problems, and the respect engendered from working closely together.

Well, I must admit, we'd been together since Randolph was formed. So probably some of that conformity just developed because we were in the church, and then we came to the new building. We'd been through a lot of changes. And we'd survived those changes together. And certainly in the five years we've been together, all of us have had our personal things, and we've certainly supported each other there. So probably some of it is just a trusting relationship. Plus, with all that we know about 4-MAT, we certainly have opened our eyes to "everybody's different." That we should celebrate diversity. And we've been able to bring that diversity to the group and say, "You're good at that, you can take care of that" (2intrv2, L. 1178-1199).

As a guiding principle or belief, respect played many roles for Celia. It enabled her to create a positive classroom environment that freed her time to accommodate instruction for individual students, it determined how she viewed and worked with gifted learners, and how and why she cultivated relationships with her colleagues to further advance her interest in meeting the needs of gifted learners. In working with gifted learners, respect propelled her to address their needs. This guiding belief may not be enough, however, to truly meet their needs with planned, differentiated instruction throughout the day.

Belief 2: Children should be problem solvers

Celia traces the root of this belief to her family, her educational background, and her personal learning style. She states that her parents, a nurse and a coordinator of athletic programs for a military base, were very practical people.

They didn't say what you had to do. Well, if you had a problem, then you had [to solve it]. If you had a problem, they just sort of made you think for yourself (2intrv3, L. 296-302).

When planning assignments for students, she is concerned they challenge students to think, "...in all subject matter. And important for life skills, too. Conflict.

Everything. We work out our problems together" (2intrv3, L. 272-275). This early exposure to solving one's own problems was reinforced in her undergraduate studies at Shippenburg.

Most of my teacher education training at Shippenburg was very problem-based. Every professor, in all the teaching subjects [stated]: 'If the children can't problem solve, they're not doing math' (2intrv3, L. 286-291).

In addition to these past influences, Celia acknowledges that her personal learning style is a practical, hands-on, "let's figure it out and do it" style. She links this learning style to what she emphasizes when teaching math.

I mean, if they can't problem solve, they can't do math. It's all from my type three (4-MAT) learning style; the practical; I'm sure it is! But if they can't solve a problem, what good am I teaching them? I mean, again, if they left my classroom and can go to the grocery store and can, you know, I have this much money and can I buy this; and I think, it's much more than memorizing.

In both the subject matter she taught and the way she managed her classroom, Celia focused on students' ownership of problems, with her role as the facilitator. To further promote growth in this area, Celia modeled self-monitoring strategies and stressed metacognition in all curriculum areas. As the day began, she reviewed major events on the daily schedule. Throughout her lessons, she reminded them of how much time was left, and what other projects they needed to work on.

Students were reminded that they had about five minutes before the first bell students needed to clean-up (2ob3, L. 271-273)...Students were starting to finish up their contracts, and Celia reminded them of their individual legends they had started, and the illustration of these with moats, bridges, etc. (2ob4, L. 149-153).

Her reminders were different from that of other teachers I have worked with in that she was very consistent in giving them feedback. She did not nag individual students. Her classroom management system maintained student behavior without her having to control them directly. Therefore, feedback was given as a matter of routine, not because students were off task. Celia states that she began using self-monitoring strategies with students as a result of her training in gifted education and work with student teachers.

That's probably more from the gifted training. Self-assessment. And with student teachers, too, because I always tell them, "This is the only experience you'll ever have to have somebody with you, guiding you. From now on, it's going to be self-initiated. You're your own criticizer, your own judge. You know, never again will you have somebody helping you. Telling you what you're doing right and wrong (2intrv3, L. 358-369).

As students shared responses to problems, Celia stressed metacognition. To Jared, she asked, "How did you get that answer?" Later on, Celia tells the students that estimating is good, but there is a better way to get the answer. She illustrates this on the board using a number sentence method to solve the problem. Students checked their math with calculators; rushed to assist a troubled peer, and designed and built moats for their classroom doorway while studying medieval history. Celia hopes that experience in problem solving will lead to good life decisions.

Knowledge of Pedagogy

Celia used a variety of pedagogical practices in her room that shaped how she defined and practiced differentiated curriculum for gifted learners. Before exploring these practices, it is important to mention the personal characteristics that acted as filters for how and when she would employ specific pedagogical routines. Throughout our work, Celia often mentioned that she did an activity with students because she was a "three" according to the 4-MAT learning styles inventory. For example, when I asked her why she chose to do timelines with her students, she stated,

I'm a pictorial learner, and in teaching history, just to show sequence of that event. And I was trying to make it a more concrete experience. It was something that happened in the past. I mean, three's hate [studying] history. We see no reason to...it's done, let's just go on. And to make it something that I'd enjoy and visualize...(2intrv3, L. 417-428).

It is important for readers to understand that many of Celia's decisions reflected her personal learning style. Traits that dominated her teaching included a high level of organization and order in the classroom and the need to focus on practical outcomes of learning for herself and her students. With this in mind, I will explore the pedagogical structures Celia used as vehicles to implement differentiated instruction. These included the Accelerated Schools Model, cooperative learning, whole-language, and strategies from the field of gifted education.

As a teacher and then lead teacher for the STARS (at-risk) summer school program, Celia was trained in the Accelerated Schools model endorsed by the county. Two precepts of this model evident in Celia's regular classroom instruction are:

1. High expectations are held for all students; and
2. Students need to construct meaning through active, hands-on experiences.

Both of these precepts were incorporated into daily routines, and provided Celia with her justification for using so many whole-class activities. Unfortunately, she never appeared to challenge the appropriateness of her delivery method which may have led to alternative routines more appropriate for differentiation of curriculum and instruction.

As documented in "Celia's Day," much of her instruction was whole-group. Celia defended this practice by stating that her curriculum was geared up, and support was given to those unable to work independently at this level.

Usually the book was scaled up. And so for those children for whom it was difficult for, we read together. We discussed it. We discussed the questions. Um, the readability maybe wasn't, but the theme was scaled up. Like Stone Fox. And most of our books were not third grade. They tended to be more fourth and fifth grade...(2intrv3, L. 892-906).

Books were chosen by the teachers on the grade level to support the theme. Celia stated that student interest was acknowledged by not using books that students had not liked in the past. Provisions for student interest were also made during independent reading time.

In addition to gearing instruction up, Celia holds high expectations for all of her students. Students underachieving sit down with their teacher and talk, and then re-do their work.

...and what I've done, thinking of Adam in particular, if I see him slipping, what I'll say is, "But can you still, even if you're not particularly interested in this story, I know you're capable. And Adam, when I quit expecting from you, then I'm not doing any of us any good."

So, I have high expectations for all of my children, and I won't let any of them, if they slip, we sit down, and we do it all over again. Together. We talk about it first. [And then we] staple it together. So that the parents see. And I write on it, 'Re-did.' And this clip up here is everything that I won't accept. Because I don't just write lessons. On the board here are metal clips. Everyone comes in the morning and sees, and they check that...(2intrv1, L. 1132-1158).

By not accepting work below a student's potential, Celia emphasized to students that they were all capable. She adapted her cooperative learning models to create a positive learning environment that provided students with a framework for behavior, and groups were rewarded for working together.

The second tenet of the Accelerated Schools model, constructing meaning through hands-on experiences, also meshed well with other goals appropriate for gifted learners. Students were expected to be self-seekers of knowledge and to generate their own solutions to problems, rather than absorb information from textbooks. Interest centers for Mexico and medieval history were available, along with a wide assortment of books and reference material. Both language and math activities related to these opportunities, making learning meaningful to students and giving them the opportunity to work with real problems and present to real audiences.

To these precepts from the Accelerated Schools model Celia added and modified elements of best practices for gifted students. For example, she pre-tested in spelling and math, and provided enrichment and some acceleration for students in these areas, as well as independent studies or center activities. She adapted the Talents Unlimited model to extend core curriculum for all students.

I often did the brainstorming...the many varied and unusual things...finding out ways...for example, that math assignment. Go home

and find the many different things you measured in meters and centimeters. Did a lot of the 'what ifs.' When we were studying the sun and the stars, what if we didn't have the sun. And certainly the planning...Yes, I do talents (2intrv3, L. 773-786).

In addition, she used shared inquiry with all of her students because this, too, demonstrated her belief that all students benefit when instruction is geared up. To integrate concepts and help students make connections, Celia used a whole-language, integrated approach to teaching reading. This was somewhat limited, however, because Celia felt it was important to teach science and social studies as discrete subjects to accommodate mainstreamed LD or ED students.

The pedagogical techniques used by Celia worked well for her because they meshed with her basic beliefs, her training and experience using the accelerated schools model, and her personal learning style which preferred organized, sequential tasks. These structured models aligned with her need for a structured classroom.

Professional Growth and Reflection on Teaching

Like Titus, Celia considers herself to be a life-long learner. She belongs to several professional organizations, served as a clinical faculty member of a local college to support student teachers, and presented at an ASCD conference with faculty from the college on the dynamics of their student teaching program. She is currently an assistant principal at an elementary school, and sometimes aspires to begin further graduate course work in the future. At other times, she thinks of returning to the classroom because she misses the bonding with students.

CHAPTER 5

Cross-Case Analysis

Wolcott (1994, p. 182) states that the purpose of case studies and in-depth fieldwork is to "...shed light on a phenomenon; they are inefficient ways to conduct surveys." He further elaborates that there is a tendency to compare only when one cannot get to the heart of the matter! Wolcott stands firm that depth, not breadth is the heart and soul of qualitative research.

Miles and Huberman (1994, p. 173) give two reasons for pursuing cross-case analysis: generalizability and to "deepen understanding and explanation." While generalizability is not considered to be a goal of qualitative research, the tendency to want to draw broad conclusions from the thick data of a case study persists. Miles and Huberman believe it is important to try to pursue the relevancy of case study findings to similar situations. Likewise, they concur with Glaser and Strauss (1967, 1970) that multiple cases help predict when specific conditions may exist for the replication of findings and form general categories of how these conditions may be related.

This chapter seeks to delineate the factors that worked together to explain how these two teachers defined, approached, and implemented differentiated instruction for the gifted learners in their classroom. These include contextual or demographic information, experience and training for gifted students, beliefs and personal characteristics, and instructional routines or practice of pedagogy. As a result of using the narrative methodology, I conclude that a teacher's beliefs and personal

characteristics, shaped by experience and training, interact with their environment to determine the instruction that occurs for gifted learners in a classroom. While the following matrix summarizes the main principles for this section (see Figure 1), it is important to remember that in reality, all of these factors worked in a synergistic fashion. Each teacher's beliefs and personal characteristics appear to be of primary importance because they worked as filters to interpret training and experience, and helped determine their perceptions of the context in which they taught. Together, these factors determined the decisions these teachers made for themselves and their students. It is important to note that both teachers demonstrated notable weaknesses in truly meeting the needs of gifted learners in the regular classroom. These weaknesses will be explored more fully in Chapter 6, under "Discussion."

Figure 1
Cross-Case Display

Attribute	Site 1, Titus	Site 2, Celia
DEMOGRAPHICS/ CONTEXTUAL INFORMATION	25 yrs. old w/ est. faculty; 650 students; 40% free/red. lunch; transient pop.; 28:1 pupil/teacher ratio	4 yrs. old; current principal chose staff; stable, middle-class pop., but high-growth, bedroom community to DC; 24:1 teacher/pupil ratio
EXPERIENCE & TRAINING -Self as professional	16 years; M.Ed. Curriculum & Instruction Staff development in g/t Member of VAEG; presented for several years Initiated integrated teaching at her school; had mentor for this; published 3 books on integrated instruction; received numerous awards	5 years, grade 3 M.Ed. Administration Staff development in g/t Completed master's in administration; principal acted as mentor; hosted student teachers; sought positions of leadership
BELIEFS & PERSONAL CHARACTERISTICS -Toward gifted learners -Personal characteristics	Develop "I can attitude," show students they can learn; do this through choices; teach children to compete within themselves; Prefers all students "look alike"; equates indiv. for gt. as "elitist" but acknowledges its necessity "Stylized Performer"; holistic; open, jovial, people-person; reflective thinker; sought to make emotional connections to learning for students; pursued personal creative outlets; control est. through interests & choices	Develop "life skills," to include decision-making, problem solving, cooperation Respect needs of indiv. students; equates acceleration/enrichment as a "reward" "Problem-solver"; analytic; ambitious, competitive swimmer, seeks leadership positions; sought practical connections to learning for students; high need for structure
INSTRUCTIONAL ROUTINES -Flow of day -Management -Curriculum Models -Grouping -Curriculum Planning -Assessment	Interwoven, integrated instruction Open; students as decision-makers Whole language, integrated instruction; strategies for gifted interwoven Flexible groups by student choice; focused on small group & indiv. instruction Generative curriculum; builds and flows from students and teacher Alternative assessments; evaluates students against themselves	Thematically based, but most subjects discrete Structured routines and parameters Accelerated Schools model; strategies for gifted discrete Groups est. by teacher through pre-testing or assignment; focus on whole-group work with curriculum geared-up Curriculum guides and grade-level collaboration Traditional; high-expectations, will not allow students to underachieve
QUALITY OF NARRATIVE	Consistent teaching and beliefs; highly-articulate individual	Consistent teaching, but inconsistencies noted in narrative; beliefs still forming and has difficulty articulating them

Demographics/Contextual Information

As I mentioned in the "Researcher as Instrument" section of the methodology, one of my biases is that "context means everything." From some points of view, the demographics of a school may not be a major factor in this study. I contend, however, that they need to be addressed because they influenced the cultures of these schools. These school cultures carried different sets of expectations and challenges for these teachers, in addition to different rewards for teachers meeting these challenges. Although it is not the intent of this study to address how school culture may affect these teachers' abilities to differentiate instruction, it grounds the study in a context that helped shape them.

While both teachers taught in the same suburban county, their student populations were strikingly different. Fordham Elementary was twenty-five years old, was renown for its "established" staff, and had a highly transient, at-risk population with over 40% of its students receiving free and reduced lunch. Because it was an older school with no room to add new classrooms, the existing classrooms were overcrowded. The average pupil/teacher ratio was 28:1.

Many of these students brought their troubles to school, and Titus adapted her curriculum to ensure that all students would feel successful in her classroom. She did this by choosing meaningful themes and activities, cultivating relationships within the community to provide a steady stream of parent volunteers or pre-service teachers in her classroom, and making sure that all students were given opportunities for enrichment or acceleration. Titus felt strongly that it was too early to identify these

transient second graders, many of whom exhibited emotional difficulties, as gifted or non-gifted.

Titus' emotional personality meshed with the needs of this population.

Working with these students was rewarding and meaningful to her. Unfortunately, she often became so absorbed with their needs that they became her rallying cry for not addressing the needs of the gifted in more specific ways. Compared to this population, she perceived gifted students as "elitist." She could tape a book for a non-reader, but was unable to provide a noticeably individualized assignment to a gifted student. The needs of her major population, the at-risk students, dominated her thoughts and emotions about teaching.

By contrast, Randolph Elementary was a new school. Its airy campus was in a middle-class, high-growth area of the county, where most of the moms stayed home with their children. Staffing for the new school was the responsibility of the principal, and she hired those who could fulfill her mission. As a young, ambitious teacher, Celia found herself in a fertile environment for professional growth. While Randolph did not have an excessively high at-risk population, it did qualify as a Chapter I school, and received funds to develop an at-risk program along with all other elementary schools in this county. As part of her ambition to seek a position of leadership, Celia became involved in Randolph's at-risk program when it was initiated. This led to a position of lead-teacher during a summer session of the program, which fulfilled her need for an administrative internship. Thus, unlike Titus who found

working with at-risk students an end in itself, Celia worked with them as a means to an end. Her goal was to become an administrator, not an experienced teacher.

Celia's classroom was more homogeneous than Titus', with more stability and support at home. Parents expected more for their gifted learners, and Celia responded to their needs.

I pre-test. And I think some of it then came from once I started that, with a couple of things, parents now expect that, and I certainly have parents who come immediately and tell me...They just come in and say, "What kind of opportunities will be provided for these kids that have special needs?" So I guess just the communication between the parents and the students (2intrv2, L. 877-889).

Celia began adjusting her curriculum for gifted learners in a reactive fashion.

Unfortunately, this "quick fix" method became her mainstay for "differentiation," and because her efforts were visible to the principal, she was rewarded accordingly.

During the literature review of this study, I speculated that teachers who differentiated for the gifted were perhaps those who differentiated for all of their students. While this still may be the case, it may also be true that differentiating for certain sub-populations in the classroom does not necessarily mean that the teacher differentiates for gifted students to the degree and depth that they should. Both Titus and Celia provided specific expectations, curriculum, and support to help their at-risk students, but neither went quite as far in working with their gifted students.

Titus became emotionally involved in meeting the needs of her at-risk students, and by contrast felt little compassion or need to individualize for gifted learners. As an emotional teacher, she could not figure out how to spread herself in this other direction.

By contrast, Celia used the demographics and cultural environment at her school for avenues of professional growth. They provided her with opportunities to become recognized, and were a means to an end. She reacted to the needs expressed by the parents of her gifted students, and tried to please them. At the same time, she worked to become recognized as a leader of at-risk programs within the district. This may explain some of the superficiality of her instruction.

Both teachers utilized their strengths to fill voids at their schools to earn recognition and status. Immersed in a master's program focused on integrated curriculum, Titus saw the fit between her studies and the at-risk population she was teaching. She worked at redefining curriculum among an otherwise entrenched staff and, boosted by her mentor, received much recognition. This encouraged her to continue to grow in this direction. Celia, on the other hand, meshed her desire for leadership opportunities with her new school's need to create programs while involving the recently established community. She was mentored by her principal, who had many jobs that needed to be done, and thus both prospered. Both teachers were rewarded for work in areas other than gifted education. The needs of these students was not a priority at these sites during these times, nor was it a priority of these teachers.

Knowledge and Training

In both case studies, the knowledge base relating to giftedness was limited to the staff development training provided by the county in which these teachers worked.

These classes, a total of approximately 15 hours of instructional time, included Characteristics and Identification of the Gifted, Shared Inquiry, 4-MAT (Learning Styles), Talents Unlimited, and Differentiating Curriculum. After taking the initial training, no systematic follow through was used to ensure that teachers were, in fact, differentiating instruction to meet the needs of gifted learners. Supervision of this was left up to the building principals, who in both cases had no formal background or training in this area. However, an itinerant resource teacher serving identified gifted students worked with both teachers upon their request to provide guidance and materials.

A point that may be argued is that neither teacher truly differentiated instruction to meet the needs of gifted learners. They both included higher level thinking skills in their curriculum, provided an environment conducive to gifted learners, placed emphasis on developing leadership skills, but remained weak in delivering high-level content and process skills on a consistent basis. Where the choice of high-level content was given to students, specific goals and rubrics designed to help students attain these were not always provided. Both teachers applied concepts of differentiation to their overall lessons, but did not specifically design instruction that included a scope and sequence of content and process skills to challenge them in their areas of strength.

As the researcher of this study, these concerns at first appeared to be weaknesses in the selection of respondents. However, after reviewing my methodology for selecting respondents out of a pool of 1200 teachers, I need to state

that these teachers qualify for this study because they met the expectations for differentiating within the philosophy of this school system. They applied the knowledge provided to them, sought help from the resource teachers, and genuinely did their best to meet the needs of these students. The context in which they received training and worked qualified them as teachers working to differentiate instruction for gifted students.

In the continuum of differentiation, these teachers are by no means experts. Given further training and guidance, they most likely could become better. I make this statement because of the other factors that influenced their teaching; namely, their desire for professional status, their commitment to students, and their desire to further their skills and professional growth.

What both teachers did possess were solid teaching skills. In Berliner's (1988) continuum of teacher's expertise, Titus could be characterized as an "expert" teacher, while Celia would most likely be labeled "proficient." Titus demonstrated fluid routines, could improvise during a lesson, was able to acknowledge different types of giftedness and used an array of knowledge from different disciplines to reach her students. Celia, on the other hand, was proficient in pattern recognition and ways of identifying students needs, but remained deliberate and reactive in her thoughts about teaching. She had difficulty understanding why she taught as she did.

Shulman (1986) states that understanding the "why" is the true mark of a professional.

The professional holds knowledge, not only of how -- the capacity for skilled performance -- but of what and why. The teacher is not only a

master of procedure but also of content and rationale, and capable of explaining why something is done. The teacher is capable of reflection leading to self-knowledge, the meta cognitive awareness that distinguishes draftsman from architect, bookkeeper from auditor. A professional is capable not only of practicing and understanding his her craft, but of communicating the reasons for professional decisions and actions to others (p. 13).

By this definition, Titus would be considered a professional, but Celia would not. I must argue one point in defense of Celia. While her inability to state "why" she taught the way she did may reflect some weaknesses in experience and knowledge, this may also be a result of her personality. She was not a reflective thinker, she was a "doer."

Thomas Good summarizes Ernest Boyer's introduction to David Dill's book, What Teachers Need to Know with the following three components of outstanding teachers:

- They possess powers of expression and abilities to relate to students;
- They possess the ability to assess the nuances of student potential; and,
- They demonstrate skills in coaching.

If these three components are used to rate the effectiveness of Titus and Celia, then they are outstanding teachers. They are not, however, outstanding teachers of the gifted. To become so, they need to be able to develop the nuances of student potential on a consistent basis by developing and using appropriate curriculum and resources. By making this a priority item at both schools, both teachers may have worked harder to achieve recognition in this area.

Self as Professional

Both teachers perceived themselves to be professionals, or experts in their field. The activities they engaged in to receive status differed, however, and did not relate directly to meeting the needs of gifted learners. They both filled voids in their schools to gain recognition and status, and had mentors who helped shape the paths they would follow to achieve this recognition.

Titus taught at an older school known for its "entrenched" faculty. Changes in curriculum and instruction needed to occur, and Titus became the change agent. Her mentor supported her in her search for integrated curriculum. As a result, she received much recognition within the division for pioneering these strategies, and later authored three books on this subject. Her sense of professionalism stemmed primarily from the recognition she achieved by presenting at conferences and serving on committees for curriculum and instruction. In addition, she found her hands-on, constructivist approaches successful with at-risk learners, which further solidified her sense of competence and professionalism in teaching.

Celia, by contrast, filled a void for leadership at her school. The building and staff were new and young, and the county was implementing a new program to help at-risk students. Celia did not foresee herself teaching long, and coupled classes in administration with practical leadership opportunities at school. Her excellent organizational skills caught the attention of her principal, who mentored her as she worked to build a resume. She further built a support base by collaborating with various resource teachers, her third grade colleagues, and the local college by hosting

student teachers. Through the completion of her master's in administration, participation in leadership opportunities and the expansion of her support base, Celia enhanced her sense of self as a professional.

By filling voids in their schools, Titus and Celia earned recognition in areas that aligned with their personal goals. Neither perceived gifted education as a primary goal, and thus their sense of professionalism was not affected by what they achieved or failed to achieve with these students. They were "good" by the measures that mattered in their environment, and were thus perceived as professionals by colleagues and supervisors alike.

Beliefs and Personal Characteristics

Qualities essential to teachers of the gifted working in heterogeneous classrooms are a commitment to adapt curriculum to meet different readiness and performance levels, and the desire to help all students understand and accept the likenesses and differences of their classmates. Neither teacher in this study was able to give evidence that they embodied both these beliefs and characteristics to address the needs of gifted learners.

Beliefs

Both Titus and Celia held strong beliefs about their roles as teachers and how they viewed differentiation. As a reflective, experienced individual who found pleasure in discussing her views on education, Titus' beliefs are filled with depth and honesty. Celia's youth and proclivity for short answers hindered her in this area, but her responses indicate dedication toward meeting students' needs.

In working with her highly at-risk population, Titus' main goal was to develop an "I can" attitude in students. She wanted to show students that they could learn, and she did this by giving students choices and working with their individual interests. She strove to help them each find a specific talent in which to excel, and this pertained to all of the students in her classroom.

I see differentiation as being essential to everyone. My differentiation goes across the entire classroom. I believe in the individual's right to an education to the best of their ability, and therefore that does include the gifted, but it also takes in the learning disabled, Chapter I students, and even my average students. It takes everyone in (1intrv2, 212-224).

In addition to developing the talents of all her students, Titus preferred that all students "look alike." Although she acknowledged the need to individualize for gifted students, she was very uncomfortable with this, and cited her own biographical past to support this belief. She did provide her students with opportunities for research, advanced content and process skills, and acceleration and enrichment; however, she did not believe that it was "fair" to offer these opportunities to just her gifted learners. As a result, she offered open-ended assignments to everyone and provided students with choices, but did not specifically design lessons that involved greater breadth or depth of core concepts for her gifted learners. Furthermore, because she felt strongly that all students "look alike," she did not help gifted learners understand and accept their talents and enable them to feel appreciated by their classmates for these qualities.

True to her personal learning style of "problem-solver," Celia felt her role as a teacher was to develop in her students "life skills." She defined these as problem-

solving, decision-making, cooperation, and respect. These beliefs determined how she taught, and influenced her view of differentiation.

Celia viewed differentiation as another problem-solving activity. If a child was gifted in math, she worked with the resource teacher to develop a math center and teach an after-school math club. If a child was gifted in writing, she provided that student with extended opportunities in writing. Her beliefs on differentiation did not cause her to re-think major portions of her lessons, or to struggle with integrating these demands into her already busy agenda. Her definition of differentiation basically illustrates a lack of definition.

I believe that gifted children do need to be enriched and challenged. But I also believe in an accelerated approach to learning, that all children need that. I don't like remediation. I don't like drill and practice. I mean, if you can show me that you can do it in three problems, then let's go on to something else. So meeting the needs of the gifted in this classroom, I try to approach so much of it through whole language, thematic type teaching.

Here, she expressed a medley of ideas, but never elaborated on one that truly defined how she differentiated. Once, when conducting a member check of earlier themes I had noted in her teaching, after I felt we had established good rapport, I again probed to uncover her basic beliefs and philosophy about teaching. She clearly was uncomfortable with this, and her response indicates a lack of depth or ability to express basic emotions about teaching.

C Um...this is heavy stuff...It's so philosophically based.

P Are there any big beliefs I may have missed? These are the ones I took from seeing you [teach].

- C It probably is saying, I mean I just believe that every child could learn and be successful in school, and does stick with individuality. I just truly believe that if a child is failing school, the school is failing the child. And we're not doing enough to meet the needs of that student. And I can't get that point across to people who have been teaching for awhile. So if I step back, and work with people who haven't yet gone [into teaching], then I can get that point across, because it's probably the most important (2intrv3, 1461-1475).

Celia's thoughts here tend to run broadly, and appear to state feelings about working with at-risk learners. They are not grounded in stories about students, but then Celia is not a storyteller. Her teaching reflects thoughts about schooling, but lacks deeper understandings about the link between students' needs and what they should be taught.

Celia's beliefs were better viewed in the classroom than through interviews. In her room, she modeled and demanded respect, and interpreted students' behavior rather than reacting to it. She was able to individualize for gifted learners without feeling apologetic to other students. Once again, however, this strength became lost when we interviewed. On several occasions I asked Celia to elaborate on how the other students in the room feel when she establishes a differentiated assignment for small groups or individual students. As if caught by surprise, she stated that they accepted it; the gifted student was "rewarded" because he or she could do the work. This equating of differentiating with a reward is troublesome; as a field, gifted education has struggled long and hard to shake an elitist stigma. More importantly, the term "reward" conveys the idea that these students do not deserve assignments adjusted to their level of instruction; for them it is an "extra."

Both Titus and Celia expressed strong beliefs about their roles as teachers. The content and quality of their responses differed markedly, and interestingly, the teacher who expressed the greater depth and emotion had the greatest moral difficulty in delivering differentiated assignments. She included elements of differentiation in all of her lessons, and thus continually worked to refine her belief system. By contrast, Celia's problem-solving filters allowed her to "reward" the student (or group of students) by providing an alternate assignment, and thus her belief system remained intact. She respected and "rewarded" her gifted learners with more challenging activities. Neither teacher worked to help gifted students feel more comfortable with their talents within the classroom. Neither teacher expressed dissatisfaction with the fit of their beliefs and their ability to meet the needs of gifted learners.

Personal Characteristics

While working on this study, I often became stumped on the differences between these two teachers. In their own ways, they each tried to differentiate instruction for gifted learners. And yet, they approached it so differently! One struggled with her demons, the other matter-of-factly set up a center and informed the class that this was "for Adam." Could one be right and the other wrong? Was either or neither of them meeting the needs of these students? Resolving these issues caused me to read and re-read my fieldnotes and transcripts, in addition to further literature on teacher's growth and change and curriculum for gifted learners. With renewed vigor, I turned to the data again, and must finally state without hesitation that these teachers' personal characteristics and learning styles played tremendous roles in

shaping how they taught. These characteristics interacted and shaped their beliefs and instructional routines, which in turn evolved through additional knowledge and experience. The synergetic relationship between these teachers' learning styles, beliefs, training, and social environments worked together to define how and why they differentiated curriculum for gifted learners. While I must write about these sections discretely, I want to place emphasis on my conclusion that these teachers' personal characteristics and learning styles interacted with their experience, beliefs, and instructional routines to form the narratives of their lives as teachers.

Titus is what Howard Gardner (1994) terms the "stylized performer." In reviewing the narrative section of this study, she added a few comments that elaborate on how she views herself as a teacher. It is interesting that learning styles had never been part of our conversations, and yet she cites this as critical to her essence as a teacher.

I'm not sure it's only the performance that I love. I have a strong need to be creative. 'Performance' is only one way to fulfill this. I thrive on the creative tasks in teaching; planning, implementing, and the problem solving. I'm an INFP in Meyers-Briggs; so were Hemingway and Beethoven! I love working with 'challenge' kids because it calls on all my creativity to try to figure them out and lead them to successful learning. I can be a ham. I can have the kids write poetry with me. We compose. All those creative things, including planning and presentation, are what I love. I agree with all else. Good job!

Titus sites her musical heritage and family background as instrumental to her present sense of self. In addition to being a creative individual who enjoys performing, Titus views her class in its entirety. This impacted upon how she served the needs of

individual students; she did not like students to be viewed as different from one another.

Titus was reflective by nature and was able to express herself well and willingly tackled difficult questions as part of this study. She did not become defensive when I probed her thinking. She taught from the heart, and sought to keep students' interests by helping them make emotional connections to learning. She maintained classroom control by working with students' interests and giving them choices, both important facets of her belief system.

Like Titus, Celia cites her biographical past and personal learning style as instrumental in determining how she teaches. To borrow a term from Howard Gardner (1994) again, she is the "problem-solver." She approached teaching as a series of problem-solving activities, and for each problem, she added a new solution. While this addressed immediate needs, she had difficulty articulating an overarching belief system. At times, she seemed unsure of herself, and I was not sure whether this had to do with her inability to synthesize research into a whole, whether she lacked specific knowledge, or whether she was just uncomfortable elaborating. An example of her inability to synthesize details into a holistic framework for teaching occurred when we discussed the cooperative base groups used as part of her management system.

- P And what were the decisions made for those base group? How were students chosen?
- C Basically just trial and error.
- p Were there like interests, or abilities, or styles, or what?

- C All of the above.
- P Could you describe a "typical" group?
- C Mixed ability.
- P OK, mixed ability was a criteria then.
- C And really, you have a real strong math student with a real strong language student. Somebody who likes to speak for the group, and somebody who's just real cohesive. I guess you'd call them your type I. Just likes everyone to get along. and not knowing these children, that's why it took a lot of switching to kind of mix. And certainly, some are better than others, but I'd gotten to a blend that worked the best.

At times, I had to wonder if my probing was steering the conversation, or if it was, in fact, loosening up her thoughts so she would respond freely. She tended to give quick one-liners, and only elaborated after further questioning. The following example again illustrates how she could isolate parts of her teaching (after painstaking probing by me), but was unable to synthesize these parts into a single goal.

- P Let's start with the purpose of sharing time.
- C Well, as I look through them, I guess the most important reason is I'm looking at a whole-language structured classroom, trying to make as many implementations of that as possible, on the ways I feel appropriate in the third grade. One is just that it's a shared language experience. The children are encouraged to get up and speak in front of their peers...
- P And the rationale for that is what?
- C Just that it's another language experience, in addition to reading and writing.
- P Is it to develop oral language, then?

- C Oral language, and with that, too, looking at our at-risk program, is building self-esteem. So certainly any opportunity where they can bring home to school, whether their hobbies, or anything they might be and sharing that with their peer group. Plus also listening skills, because they are afforded then the opportunity to question their peers about things they have brought in, or shared homework, so they have to listen to what they are sharing to be able to formulate a question from that.

By the end of this conversation, Celia mentioned a number of skills that she felt it was important to teach. I was left wondering, and you might be too, as to whether she really knew what her objective was for "sharing time."

As a problem-solver, Celia sought to help students make practical connections to learning. This need came through again when I interviewed her a year later in her position as an assistant principal.

I guess, mostly, what I think I'm good at is teaching. And this job doesn't necessarily allow me to show that. And that can be very frustrating. Who needs best to be modeled and guided to, but the teacher. And those who are good at that, and I like the practical aspect of student teaching, and getting you prepared to...I'd get to teach practical skills that you would need to be [successful] (2intrv3, L. 1432-1444).

Celia believes that her ultimate calling is to teach practical teaching skills to preservice teachers at the college level. She never mentions that there may be other skills that are "not so practical" that teachers may need to understand and apply.

In addition to Celia's problem-solving approach to life, she was an individual who liked structure and control. She developed a sophisticated and smooth classroom management system that achieved her need for an ordered room while instilling in students a sense of respect and cooperation for and with one another. At one point,

Celia stated to me, "Just to run around the room is not my style. Let's all get settled in (2intrv1, L. 890-892)."

This need for control, order, and structure influenced how she met the needs of gifted learners. She approached differentiating as the application of different processes to her repertoire of techniques. As long as these skills were easily delineated and pre-packaged, she could deliver them. Differentiation for Celia meant including higher-level questioning strategies, flexible grouping (her choice), pre-testing in math and spelling, establishing learning centers, and providing enrichment opportunities before and after school. True to her learning style and personal characteristics, these strategies were usually added to the day, and rarely became meshed with an overarching belief system of how to best serve the needs of gifted learners with multiple learning goals. For example, she used one tradebook for the entire class and added interpretive questions as part of the reading contract. All students read the same book and did the same set of questions, with less able students working with her in a small group. She believed she was differentiating instruction for everyone because she was teaching "up" and not "down."

In addition, the student who was gifted in math had a special "center" on programming, but he usually used this before or after school. Other students gifted in math attended the after-school math club she established with the gifted resource teacher. What Celia appears to lack is a conceptual understanding of curriculum and instruction. Her thematic units were isolated topics chosen by the grade level to fulfill what they perceived was a need to teach from county curriculum guides. As a result,

deeper levels of abstraction and connections between and among themes was never a possibility or consideration. Because she placed so much emphasis on the "practical" nature of learning, I have to wonder if she is capable of teaching conceptually. Neither my observations nor our interviews give any indication that she is comfortable or capable of thinking this way. The result for students was a curriculum lacking in depth, breadth, and complexity.

While Celia added process skills through Shared Inquiry and Talents Unlimited, their effect on students was once again limited. These skills were introduced and practiced in a whole-group setting, and were not always transferred to other areas of the curriculum. As with Titus, the opportunity was presented to students to "get these skills," but they were not infused into the curriculum specifically for gifted learners. A sense of scope and sequence for developing abstract content and higher-level thinking in students was missing from the instructional day.

Without doubt, the personal characteristics and learning styles of these two teachers played a critical role in how they assimilated and transformed information to meet the needs of gifted learners. The "stylized performer" qualities of Titus resulted in a passion for teaching that sought emotional connections in the classroom. It was through the emotional connections of student choice and interest that Titus worked to meet the needs of her gifted students. Celia, on the other hand, viewed differentiation as just one of many "problem-solving" aspects of her job. She maintained her need for a structured, ordered classroom and implemented strategies from the field of gifted education to the existing curriculum to meet her students needs.

Instructional Routines

In order for instruction to meet the needs of gifted learners, curriculum needs to flow from a conceptual framework using interdisciplinary, content rich material to develop thinking and problem-solving skills. Within this framework, gifted students need opportunities to pursue in-depth studies with specific goals that challenge them toward greater complexity and acceleration of core concepts. Instruction should help students focus on the production of knowledge aimed for "experts" in the field. In addition, students should be provided with opportunities for mentorships or apprenticeships within the community, and be given time to work together. Against this backdrop of best practices for curriculum in general and provisions for gifted students, both teachers in this study fell short of the mark of "experts."

Both Titus and Celia developed macro-routines to deliver instruction and manage student behavior to create an environment where differentiation could occur. By now, it should be quite evident that both approached these very differently. Titus remained true to the "stylized, holistic performer," while Celia used a repertoire of problem-solving strategies to address student needs.

The hallmark of Titus' classroom was the artsy flow that permeated all activities. All subjects were integrated with a focus on key concepts, and students made decisions about what books to read and where to work. The framework for Titus' classroom was the implementation of best practices from whole language and integrated instruction. Into this framework, she included elements of differentiated instruction that she meshed with whole group, small group, and individual instruction.

Grouping was flexible; at times students chose their groups or partners according to content, and at times Titus set up specific skill groups to meet student needs. Titus held fast to the concept of generative curriculum building, determining what to teach by assessing students' interests, abilities, and needs as well as her own personal interests. True to her personal model of teaching as performance, she viewed most student learning as practice. This metaphor brings us back to her personal thoughts of a little girl practicing for her piano recital. Assessment comes with the final performance; students need to learn to evaluate their performance against themselves. For these reasons, she used anecdotal notes, observation, portfolios, and informal tests to measure student progress.

Titus' greatest liability was her inability to articulate specific goals for gifted learners and establish structures to help students achieve these goals. She could not do this because of her belief that students might perceive one another as "different." While she took great pride in the sign that hung over her door, "Our similarities make us equal, our differences make us unique," she was unable to hold to this standard when addressing the needs of gifted learners. She did possess the knowledge and abilities to teach from a conceptual framework, and could, perhaps, learn to differentiate curriculum to truly meet the needs of the gifted.

By contrast, Celia's personal teaching style resulted in very different instructional routines. Her need for structure and order permeated her day. Instruction was thematically based, linking language arts and reading to either science or social studies. For the most part, however, her subjects were still taught discretely. A sense

of flow resulted from a highly structured set of routines and parameters for student behavior. The Accelerated Schools model formed the mainstay of her instruction, resulting in a geared-up curriculum that, for the most part, was taught to the class as a whole. While some strategies for gifted learners, such as higher-level questioning and Talents Unlimited were meshed within this whole-class instruction, many others, such as Shared Inquiry and acceleration in math, remained discrete. When small groups were used, the composition was determined by Celia. At times these groups were heterogeneous, at times gifted students were grouped together to build upon each other's ideas. Celia's view on curriculum was to teach "what we have to teach." She and her grade level used the third grade curriculum guides to plan their units and the books they would use to support these. Within this framework, Celia would modify and extend lessons to further meet the needs of gifted learners. By following the skills outlined in the curriculum guides and textbooks, Celia was comfortable with a traditional grading policy. She did, however, hold high expectations for her students, and made them re-do any work that she felt was not their best. Unlike Titus, she addressed underachievement with a "practical solution" to demand better performance.

Celia's greatest liability in meeting the needs of gifted learners was her inability to think and teach conceptually. Although she stated that she did not like "skill" work, this is what she was best at teaching! She taught the base third grade curriculum as outlined in the curriculum guides, and supported it with tradebooks at or slightly above grade level. Assignments for all students were usually the same, and although they included higher-level thinking skills, she did not develop different

outcomes for students of varying ability levels. Like Titus, she supported the bottom of the class to achieve group goals.

When Celia did differentiate, it was basically an "add-on" or "substitution" approach. The child gifted verbally was given a writing assignment while others practiced grammar from the book. The child gifted in math had a specific center set up for him, but he used it mostly before or after school. The students identified as gifted intellectually were able to take advantage of independent studies during center time. None of these activities, however, related to key concepts within the units studied. They were topical in nature, and did not provide students with outcomes that challenged their areas of giftedness.

Both teachers approached curriculum through the lens of their own belief system and personality. Titus worked at developing a stylized performance that took in the needs of everyone, while Celia approached teaching as a series of exercises in problem-solving. Titus needed to map out a sense of the whole in order to include strategies for differentiation; Celia solved the problem of meeting the needs of the gifted but felt no urgency to combine this into an integrated instructional program. Both were opposite sides of the same coin! Neither developed outcomes or rubrics that challenged students to work at the level of experts, and neither sought to support the efforts of gifted learners through mentorships or apprenticeships. They did, however, utilize the gifted resource teacher's expertise to help support student growth.

Summary

Titus and Celia chose to differentiate curriculum for many of the same reasons, but they did so in very different ways. Both viewed themselves as professionals, and achieved status in the community through contributions other than in the field of gifted education. Titus worked to develop integrated curricula, while Celia desired the attainment of greater position. Both were committed to their students and enjoyed teaching. Both were cognizant of their personal learning styles, and used these as a lens for interpreting their behavior as teachers. Titus perfected her art of the "stylized performer," while Celia fine-tuned her problem-solving strategies.

Both teachers developed core instructional routines in keeping with their personal characteristics and teaching/learning styles. They each used a curriculum model as the mainstay of their teaching and added strategies of differentiation to this model in keeping with their teaching styles. For Titus, this resulted in a unified system that strengthened her beliefs and commitment to allow all students to experience success. For Celia, this resulted in a number of collaborative relationships and the application of discrete strategies to meet the specific needs of gifted learners. Both teachers were committed to growing and expanding their skills, and both willingly shared their expertise with me and others in their pursuit of personal self-fulfillment.

Neither teacher utilized current strategies for meeting the needs of gifted learners in the regular classroom on a consistent basis. As mentioned earlier in the paper, these strategies support three dimensions for appropriate curriculum for gifted

students: (1) a content mastery dimension; (2) a process/product/research dimension; and (3) an epistemological concept dimension. There appear to be several reasons for this, including: a lack of desire to become more proficient in this area, a lack of training, indifferent or unclear expectations from administrators, and a weak core curriculum from which to work.

Both teachers received recognition for contributions in areas other than in gifted education. Gifted education was not a priority for them, and thus they did not read literature in this field or attend extra workshops or classes, even though these were readily available. With low intrinsic motivation toward improve their teaching for gifted learners, it is necessary to determine what extrinsic motivators might influence the situation. Once again, the answer is "little." While the supervisor for gifted education offered a series of staff development seminars to assist classroom teachers with differentiating curriculum, the enforcement of this training was left up to the building principals. Since both teachers fulfilled other areas of their principals' agendas to meet community needs, neither was expected to become more proficient in this area. More importantly, neither principal felt strongly about gifted education. Thus, although the new teacher evaluation system required principals and teachers to differentiate and individualize for all special populations, the specific strategies and performance objectives for teachers were never articulated or enforced at the building level. Finally, both teachers were expected to use the county curriculum guides as a basis for instruction. While the math curriculum was based upon recent NCTM standards, the other guides were topically based and did not readily lend themselves to

an epistemological dimension. Without training or knowledge to link the curriculum in these guides to more abstract issues, themes, or problems, the core curriculum in both classrooms suffered to varying degrees. Titus utilized her background, interest, and creativity to extend this weak core curriculum to more meaningful areas. Celia, on the other hand, was fairly content with the guides, dismissing any weaknesses as a result of "teaching what we have to teach." She was content to "extend" the curriculum through the use of trade books.

In summary, several internal and external factors contributed to these teachers' weaknesses in differentiating curriculum for gifted students in the regular classroom. Internal factors included basic personality issues, their priorities as professionals, and their personal belief system, and their definitions or interpretations of differentiation. External factors included lack of expectations for differentiation of instruction, minimal standards for teacher evaluation in this area, and a weak core curriculum.

Remaining thoughts

After working intensely with Titus and discovering she possessed a highly articulate belief system, I must confess to feeling let down when working with Celia. The expertise she possessed in the classroom never came through in our interviews, and there came a point where I felt to push further would lead to defensiveness. She is a practical and ambitious young woman who may become more articulate in finding and expressing her beliefs with time.

CHAPTER 6

Discussion

Gifted students possess similar characteristics that require a responsive curriculum in order to learn to their potential. These traits include the ability to handle abstractions, strong powers of concentration, the ability to make connections and establish relationships among data, the ability to memorize and learn rapidly, and a propensity for multiple interests (VanTassel-Baska, 1989). School curricula are usually organized for the "typical" learner, and often does not provide the depth, breadth, pace, and capacity for individualization necessary for gifted learners. Thus, for these students to maximize their potential, regular classroom teachers need to be able to adapt and modify curricula in response to their needs.

The purpose of these case studies was to attempt to understand what happens when two noted regular classroom teachers teach gifted students, and to identify the factors that facilitated or impeded their ability to teach this population successfully. Observations and interviews were used to build a final narrative describing each teacher and her craft to document how and why she differentiated curriculum for gifted learners. Two questions shaped this study, and will be viewed in the context of both the study itself and the literature review. These questions are:

1. What happens when two noted regular classroom teachers teach gifted students in heterogeneous classrooms?
2. What factors facilitated or impeded their ability to differentiate instruction?

In addition to responding to these questions, this section will review the strengths and weaknesses of the narrative method, the limitations of this research, avenues for further research, and the role gifted education may play to further enhance regular classroom teachers' abilities to differentiate instruction for gifted learners.

What Happens when Two Noted Regular Classroom Teachers Teach Gifted Students?

As noted in the cross-case analysis, each teacher approached teaching very differently, and thus approached differentiation for gifted learners in different ways, too. In this section, I want to review some of the key practices that need to be in place in the regular classroom in order for differentiation for gifted learners to occur. I want to further highlight how these "best practices" need to be modified to address the needs of gifted learners, and then examine the "fit" of Titus' and Celia's classrooms to these benchmarks for both regular and gifted students in a heterogeneous classroom. The three attributes I will work through are beliefs toward diverse learners, organization of curriculum and instruction, and individualizing student outcomes to maximize their progress. By examining these two case studies in light of these attributes, I attempt to define the fit between what needs to be in place in order to develop good differentiation of instruction for gifted learners in the regular classroom, and what that fit actually looked like in these classrooms. The following table outlines this section. (See Table 2)

Table 2

ATTRIBUTES	IDEAL SCHOOL	TITUS	CELIA
Beliefs toward diverse learners	<p><u>General</u> Acknowledge & adapt curr. to meet different readiness & performance levels; Help students understand & accept likenesses & differences</p> <p><u>Gifted</u> Identify students' areas of strengths & adapt curr. for depth, breadth, complexity; Create supporting structures in classroom for gifted learners</p>	<p><u>General</u> Developed "I can" attitude in students; Helped students learn through choices</p> <p><u>Gifted</u> Preferred that students "look alike;" Equates indiv. for gifted with elitism, but acknowledges its necessity</p>	<p><u>General</u> Respected needs of indiv. students; Provided support to at-risk and slower learners</p> <p><u>Gifted</u> Equated acceleration & enrichment as a "reward"</p>
Organization of curriculum & instruction	<p><u>General</u> Conceptual framework using interdisciplinary, content rich material to develop thinking and problem-solving skills; Focus on production of knowledge; Use flexible grouping and plan for multiple student outcomes</p> <p><u>Gifted</u> Allow for in-depth studies with specific goals for greater complexity, autonomy, & acceleration of core concepts; Focus on production of knowledge at "expert" level; establish mentorships/apprenticeships within community; Provide opportunities for gifted to work together</p>	<p><u>General</u> Used integrated, whole language approach; focused on enrichment; included concepts and meaningful learning experiences; Flexible grouping as determined by student choice and interests; Student outcomes related to contract, with different expectations for different students</p> <p><u>Gifted</u> Provided advanced reading material for those who "chose it;" Pre-tested & accelerated math and spelling assignments; Provisions made to pursue indiv. interests with teacher encouragement. Specific frameworks or goals not established. Support provided by g/t teacher.</p>	<p><u>General</u> Focused on "problem-solving" within limits of division curriculum guides; Whole-group instruction the norm, with support provided to at-risk and slower students</p> <p><u>Gifted</u> Pre-tested in math & spelling; Established centers for alternate assignments; No specific guidelines for performance; Collaborated with resource teacher to develop centers</p>
Individualizing Student Outcomes	<p><u>General</u> Performance standards; portfolios, authentic assessment; rubrics, standardized tests</p> <p><u>Gifted</u> "Expert" benchmarks and rubrics to include self and peer reviews, as well as those of experts</p>	<p><u>General</u> Observation; anecdotal notes; some rubrics linked to students' developmental stages</p> <p><u>Gifted</u> Same methods, with different expectations for gifted</p>	<p><u>General</u> Traditional grading system</p> <p><u>Gifted</u> Traditional grading system</p>

Attitudes toward Academically Diverse Learners

A common set of attitudes toward teaching academically diverse learners and the role of the teacher need to be in place if teachers are to meet the needs of gifted learners. Teachers need to be able to acknowledge and adapt curriculum to meet the different readiness and performance levels within their classrooms. They need to participate in regular staff development and training to continually update their skills and share ideas with colleagues. They need to be comfortable acknowledging student diversity, and be able to help students understand their strengths and weaknesses. The learning environment must be one of respect where all students are expected to support one another.

Within this classroom, teachers of the gifted need to identify students' areas of strengths and adapt the core curriculum to provide greater depth, breadth, and complexity. They need to be supportive of the needs of gifted learners, and provide open encouragement and convey high expectations for these students to work to their potential.

Titus approached the diversity in her classroom by hoping that all students would develop an "I can" attitude. She did this by providing choices and open-ended assignments. While she acknowledged that all students learned differently and had different needs, she was unable to openly acknowledge and support the needs of gifted learners. She preferred that all students "look alike." She equated individualizing for gifted learners with elitism, even though she acknowledged its necessity. Although she had some training in gifted education, she had not updated her skills, and thus this

belief system went unchallenged. Further training may have provided her with strategies to use with gifted learners that she could understand as equitable for all students.

Like Titus, Celia openly understood that her class was filled with diverse learners. She respected the needs of individual students, and provided support to at-risk and slower learners. She did provide special opportunities for her gifted learners, but equated enrichment and acceleration with a "reward." She did not provide support for the gifted through mentorships or other structures to help them understand or share their talents. As with Titus, she too, did not update her skills for working with gifted students. Had she done so, it may have been possible to help her develop a cohesive view of curriculum that provided depth and breadth, along with different levels of pacing to better meet her students' needs. Rather than viewing differentiation as a "reward" for students, she may have come to view it an element of good teaching.

While both Titus and Celia believed they differentiated instruction for gifted learners, they did not fully embrace the belief that these students required exceptional teaching strategies to benefit from school. Neither teacher consistently utilized research or local training on meeting the needs of the gifted in the regular classroom to improve their instructional practices. As a result of a lack of commitment or priority toward gifted learners, both teachers applied insipid definitions of differentiation to regular classroom instructional routines. They basically defined differentiation to suit their present knowledge base, and believed that if they "taught to the top," they would be meeting gifted students' needs. Their beliefs about gifted

students, their philosophies on teaching, and their competing professional goals limited their responsiveness toward gifted learners. Thus, their core curriculum formed the mainstay for differentiation in their classrooms. This, however, was also an area of weakness.

Organization of Curriculum and Instruction

To meet the needs of diverse learners, regular classroom teachers need to design a curriculum that allows for greater breadth and depth and occurs at a faster pace. This curriculum needs to include an epistemological concept dimension, a content mastery dimension, and a process/product/research dimension (VanTassel-Baska, 1989). Some strategies for each of these dimensions include:

Epistemological Concept Dimension

- Integrated approaches to teaching
- Curriculum organized around abstract issues, themes, and problems

Content Mastery Dimension

- A diagnostic/prescriptive approach to basic skills
- Pre-testing and acceleration of basic content
- Flexible grouping arrangements
- Tiered assignments

Process/Product/Research Dimension

- Student contracts to provide enrichment and/or acceleration
- Independent study
- Learning centers; and

-Questioning strategies.

These management strategies often overlap and interact, and teachers need to match the strategy to be used with the learning needs of the student, as well as the instructional situation.

When working with gifted students, teachers need to allow for in-depth studies with specific goals that allow for greater complexity and acceleration of core concepts. Students should be given autonomy for pursuing these goals, but with established criteria or rubrics to help them achieve these successfully. The production of knowledge for gifted students should be related to "expert performance," with mentorships and apprenticeships established to support student growth. In addition, gifted students need opportunities to work together.

The core curriculum used by Titus was usually conceptually based. She utilized an integrated approach that focused on connections across disciplines, and included abstract concepts and meaningful learning experiences. Unfortunately, she did not always expand upon this curriculum specifically for gifted learners. She believed that since her curriculum was "geared up," their needs were usually met.

Titus did provide more difficult material for reading, but she presented it to the class as a "student choice." This material was accompanied by separate contracts with more complex goals, an example tiered assignments. The only areas that she specifically assigned more difficult work were spelling and math, when pre-testing revealed mastery of basic words or facts. Once she identified these students, however, she set up instruction to make it appear that all students "looked alike." All students

thus received individualized spelling lists and math skill cards. At times, Titus provided her students with opportunities to pursue independent studies. Specific goals and rubrics were not always developed for these, however, and Titus relegated the issue of individual support for gifted students to the resource teacher. Thus, while Titus' base curriculum would easily have lent itself to further complexity and acceleration of core concepts, her belief system held her back.

Celia operated from a fairly weak curriculum framework. She taught from the division's curriculum guides that focused on specific skills and topics. Because she did not possess strong skills in curriculum development or a conceptual understanding of curriculum, she was unable to supplement or expand the division's shallow curriculum. She believed that by approaching teaching through "problem-solving" experiences, she was "gearing up" the curriculum for all of her students. She therefore justified her use of whole-group work with provisions made to support at-risk and slower students. Again, a lack of training and appropriate support and direction from the resource teachers and administration prevented her from questioning this weak base. By everyone's standard in this environment, she was doing a great job.

To meet the needs of the gifted, she pre-tested in math and spelling and provided enrichment opportunities that complemented the base curriculum. At times, like during her measurement unit, she did not pre-test because she believed this was already an "enrichment" unit, and thus their needs were met. An additional weakness was that once students demonstrated mastery on a pre-test, the alternate assignment

did not meet criteria for greater complexity or acceleration. It was enrichment (of a weak core curriculum) and basically kept students from being too bored.

Neither Titus nor Celia consistently designed complex or accelerated learner outcomes for the gifted students in their rooms. Titus could have done so if she was freed of her limiting beliefs, but Celia would need much guidance and support to design more complex, interdisciplinary curriculum that allowed for multiple learner outcomes. This would be difficult for her, since she liked structure and clearly defined parameters. She, too, needed to work through her belief system to allow for differentiation to occur. For example, she liked everyone reading the same book because of the "bonding" she thought it gave the class. Her ability to allow for simultaneous activities at different levels of complexity and duration would be a challenge for her. Thus, a weak core curriculum limited both teachers' ability to differentiate instruction for gifted students. Problems were compounded by inconsistent strategies for assessing students' present levels of performance and then designing appropriate curriculum and experiences to extend and enrich concepts.

Individualizing Student Outcomes

In acknowledging diversity in the regular, heterogeneous classroom, educators have learned that traditional grading practices do not reflect students' true levels of performance. To honor student diversity, assessments must match the level of task difficulty, and provide students with appropriate feedback. For these reasons, teachers in the regular classroom need to develop and utilize performance standards, portfolios, authentic assessment tasks, and rubrics to correspond to the task. When working with

gifted learners, these assessments should be brought to the level of experts in the field to promote excellence. These assessments should include ratings by experts, peers, and gifted learners themselves.

Titus used assessments that acknowledged that all students were not expected to perform at the same levels. She used guidelines from early childhood developmental math and reading stages as her benchmarks, and recorded student performance through observations and anecdotal notes and portfolios. Her greatest difficulty came in transferring these records to grades on a traditional report card! These assessment tools were used with all her students, but she held different expectations for her gifted learners. She expected these students to be further along developmentally, and would question them as they turned in assignments to convey what she expected from them. Titus did not, however, develop separate rubrics for their projects or assignments. Had she done so, she would have been better able to establish more specific and individualized outcomes that would challenge gifted learners.

Because Celia worked from the traditional curriculum and taught to the class as a whole, she did not find a mismatch between her teaching and traditional grading systems. If she felt students were not doing their best, she had them re-do the assignment. No separate provisions were made in her room for grading students at different developmental or ability levels.

Once again, Titus stands a greater chance of learning to truly differentiate to meet the needs of gifted learners. She knew that all students were working at different

levels, and established a framework for curriculum, instruction, and assessment that would honor their diversity. Celia understood that students were at different levels, but she really believed that by making a few minor adjustments to the division's core curriculum, she was meeting their needs. Never, during any of our conversations, did she express frustration in meeting their needs, or in the need for a major overhaul of the county's curriculum and assessment practices.

Factors that Impeded Teachers' Abilities to Differentiate Instruction

Four factors emerged as primary inhibitors of teachers' abilities to differentiate instruction for gifted learners. These were a weak core curriculum, insipid definitions of differentiation, a lack of teacher evaluation, assessment or support relating to differentiation for the gifted, and personal issues relating to their belief systems.

Weak Core Curriculum

As regular classroom teachers, Titus and Celia both used models to structure their thoughts about teaching. The whole-language model allowed Titus to enrich and expand lessons to meet the needs of the gifted, while the Accelerated Schools model "gave permission" to Celia to teach to the top and support the remainder of the class. In fact, both teachers considered themselves as teaching to the top and providing support to everyone else.

Had the county adopted one curriculum model that was conceptually based, these teachers could have received training that enabled them to understand how to accommodate student diversity while also providing a solid framework for

differentiation for gifted learners. With a solid base curriculum, training teachers to differentiate would be meshed with instructional objectives, and teachers would be able to approach differentiation as part of their daily and long-term planning. Because the county's curriculum was based upon mastery of skills and topics, the training developed to help teachers differentiate for gifted learners was very limited. It did, in fact, cause problems for teachers.

Inspid Definitions of Differentiation

Titus stated that the training she received for gifted years ago was somewhat helpful, but all too often she was left with the feeling that many of these skills could be used with all students. She believed this led her to mistrust gifted education because it did not address the needs of all learners. This clouded her belief system, an integral component of differentiation. It also prevented her from participating in more recent training on meeting the needs of the gifted in the regular classroom.

Like Titus, Celia participated in the basic core training provided to regular classroom teachers of the gifted in this division. Unfortunately, this training was piecemeal in approach, and gave Celia strategies to add on to the curriculum, such as doing a shared inquiry lesson or a lesson on Talents Unlimited. It did not teach her how to develop conceptually rich units, tier assignments, use flexible grouping, or compact curriculum. Thus, she never learned to infuse content and process strategies into her daily instructional routines.

Both teachers had training in characteristics of gifted learners and rudimentary knowledge of differentiation. Neither, however, learned strategies that they could

consistently apply to their lessons to develop greater depth, breadth, and faster pacing. Often, as they tried to apply a strategy such as Shared Inquiry to a lesson, they lost sight of their real goal (to challenge students and develop critical thinking skills) as they worked to apply the lesson to the whole class. This resulted in a watered-down approach to differentiation in order to accommodate less challenging students. The result was an insipid definition of differentiation that fell short of meeting the academic needs of gifted learners.

Lack of Teacher Evaluation, Assessment, or Support of Differentiation

With few internal factors working to help these teachers differentiate instruction, it is important to examine what external factors may have supported their efforts. These include support from the gifted resource teachers, expectations from building administrators, and an evaluation or assessment tool that clearly articulated that defined the extent of differentiation that should occur in a classroom for all students.

Both teachers in this study worked closely with their gifted resource teachers. Unfortunately, neither of the resource teachers took it upon themselves to become involved in curriculum planning within these classrooms. The resource teachers helped the classroom teachers with some individual centers, "enrichment" materials, and in the identification of students. They did not become involved in daily curriculum planning to model more appropriate strategies for gifted learners in the regular classroom.

In addition, building administrators did not encourage or expect much differentiation in the classroom. While the new evaluation system requires teachers to modify curriculum to address student needs, training and articulation regarding how much differentiation is needed or expected never occurred. Because Celia's add-on approach to differentiation was visible to others, she was held in high regard as a teacher for gifted learners. Titus' artsy approach also led to good visibility, and both parents and administrators in her school rewarded her as a fine teacher of gifted learners. Appropriate training and expectations of building level administrators, combined with support from the resource teachers, could lead to greater differentiation in these classrooms.

Personal Issues Relating to Belief Systems

As noted throughout this study, neither Titus nor Celia demonstrated or articulated that gifted learners must have qualitatively different experiences in the classroom. They did believe these students needed something else, but thought that by gearing up their base curriculum and providing some accommodations, their needs would be met. Celia "rewarded" her gifted learners with an add-on approach, while Titus strove to keep everyone equal by giving them the same opportunities. Neither teacher challenged their belief system or participated in further training that might help them understand other ways of thinking about designing curriculum rich in meaning.

To address these concerns, the field of gifted education must work with regular education to create models of teaching that facilitate teachers' abilities to meet the needs of diverse learners. As already noted, a conceptually based curriculum that

shows teachers how to expand, stretch, and modify learning outcomes for all students may help these teachers change their belief systems. Teachers need to understand the specific needs of gifted learners, and be given the tools to make real change, not add-on or superficial change. Their core beliefs about responding to and meeting the needs of their students at times helped and hindered how they worked with gifted students.

Strengths and Weaknesses of Narrative Method

Clandinen (1985) states that the strength of the narrative method is that it helps researchers understand the change process on a personal and meaningful level. He believes that if we want to understand the change process, then we need to concede that the teacher is "an active holder and user of personal practical knowledge." This study echoes his sentiments, for both teachers interpreted differentiated instruction for gifted learners in very different ways, and acted out their knowledge on different levels and for different reasons. Narrative helped to develop a trusting partnership between the researcher and practitioner, and provided a semi-structured way to discuss the teachers' acts by grounding them in practice.

During our last member check, I asked Titus if and how this study affected her thinking toward gifted students. She stated that it helped clarify her thinking about why she taught the way she did, and enabled her to develop a stronger tolerance for other teachers' styles. She believed that in the past, she thought she had all the answers, and that other teachers needed to adopt her teaching methods. By challenging her thinking through the use of narrative, Titus no longer feels this way. She believes, however, that the way she is teaching is right for her.

At the end of our last interview, Titus quietly said that she does not feel that she is as strong a teacher for the gifted as she would like to be. She is not sure that she could differentiate "just for them," but would be receptive to learning more. The trust engendered by this research method, though time consuming, broke down the barrier of defensiveness that traditionally keeps experienced teachers from growing.

Use of this research method as part of a university and school partnership could lead to positive outcomes for teachers and students.

While Titus enjoyed this research method, it proved uncomfortable for Celia. An assumption of this method is that the respondent likes to talk, and is comfortable reflecting on his or her practice. Celia agreed to participate in this study and understood its methodology from the onset. She often had a difficult time elaborating on questions about her practice, and I had to relinquish a line of questioning on a number of occasions because I sensed she was becoming defensive. Working with ambiguity was difficult for her, and she often found herself "in over her head." This methodology helped me discover the real levels of differentiation that was (or was not) occurring in her room.

One dilemma I discovered while using this methodology was that when I uncovered practices that were not ideal, it was difficult to bring them to the forefront of discussion. I spent a lot of time figuring out how to bring up the "equity v. equality" issue with Titus, but once I discovered that I could approach it from a paradox, we were able to discuss it fully. She appreciated my honesty and the challenge of discussing this, and this actually strengthened our working relationship.

On the other hand, Celia, perhaps because of her youth, found it much more difficult to discuss issues that did not portray her as "near perfect." She became defensive when I asked how she used the same tradebook with all of her students, and never acknowledged that perhaps there were other ways to structure reading to benefit gifted learners.

I believe there exists the possibility of losing some degree of objectivity when using narrative in order to maintain the trust of the co-participant relationship. As with all research, this can be a tenuous bond. Much depends upon the professionalism of the researcher and the maturity of the respondent.

Limitations of Study and Need for Further Research

The respondents selected for this study did not differentiate curriculum for gifted learners to the extent that I had hoped. Further observations and interviews at other sites with teachers of similar or greater skill in differentiating curriculum would enhance the findings of this study. These studies should screen for teachers using a conceptual approach to teaching and an articulated belief system that indicates gifted students need qualitatively different instruction during most of the day. In addition, because one cannot claim generalizability with qualitative research, more studies need to be conducted with other teachers similar to those in this study to verify or refute the conclusions posited here.

Implications for Teacher Training

After working with the two teachers in this study, both of whom were deemed "exemplary" by teachers and staff in their divisions for meeting the needs of the gifted in the regular classroom, my personal outlook for true differentiation is bleak. For our gifted students to benefit in the regular classroom, the field of gifted education needs to continue to work to enact systems-wide change. This change needs to occur at the state and local level, and needs to deal with policies and practices that improve instruction for all learners.

As educators continue to develop conceptual frameworks and benchmarks in different content areas, gifted education needs to collaborate with these groups to ensure that benchmarks are sufficiently high to challenge gifted learners. At the state level, gifted education needs to support continued curriculum reform efforts so that conceptually based learning becomes a reality. States need to further support reform by providing staff development, grants for model schools, and the development of appropriate assessment instruments.

At the local level, educators need to re-write curriculum to implement conceptual frameworks that are content-rich and focus on the development of thinking and problem solving skills. This curriculum needs to emphasize multiple student outcomes, and training to teach and assess students on these outcomes needs to become a priority. As part of this training, teachers' belief systems need to be examined and those unable to embrace the needs of gifted need to be excused from the expectation of teaching them. By the same token, new hires need to understand

the expectations of the division, and demonstrate advocacy and flexibility for their needs. Once the curriculum and training is in place, provisions need to be made to assess the program and teachers' proficiency in meeting the needs of gifted learners. As with special education students, educators need to recognize that a continuum of services may be necessary to truly maximize the potential of the gifted. Even with massive curriculum reform and staff training, the needs of all gifted students may not be met in the regular classroom.

Within their schools, principals can further support the implementation of conceptually based learning and teaching. Teachers can be teamed to complement one another's instructional styles, with scheduled meetings used to develop dialogue on curriculum planning and differentiation. Certainly, the Titus' at a school could share what they have learned with the Celia's, and both would profit from discussing ways to include multiple learner outcomes in their units of study. Identified gifted students should be clustered grouped, and teachers of these students supported with continued staff training and participation in conferences and other professional development. Scheduling should be done with teachers' input to further help them create the necessary timeblocks that are needed for learning. Finally, principals should work with their staffs to determine better ways of grouping students within the school, and among teams of teachers.

Most importantly, teachers need to take on greater responsibility for meeting the needs of the gifted. They need to actively read and utilize the research in their field to improve instruction, and challenge their beliefs when such knowledge conflicts

with pre-existing patterns of behavior. Teachers need to spend more time working and planning together, and support one another's efforts to change curriculum to meet the needs of diverse learners. Cross-grade grouping and grouping within grade levels (where levels still exist) are all avenues teachers should pursue as they work to implement curriculum reform.

Developing a professional culture at schools is not an easy task. The expertise of researchers needs to be employed in partnerships with schools to provide support, assess training modules, and help in the assessment of student performance. As new players enter the system, they should assess the merits of what is working, and make it their goal to improve those areas in need of improvement.

The major findings of this study are that without appropriate beliefs and rich core curriculum, no amount of "differentiating" is going to make a difference for gifted students in the regular classroom. It is up to the field of gifted education to promote and assist systems-wide change to challenge inappropriate beliefs and support teachers with appropriate curriculum and instruction.

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APPENDICES

APPENDIX A
SAMPLE DOCUMENTS FROM SITE I

Statement of Philosophy

Theme Planning Form

Daily Lesson Outline

Student Assessment Documents

Sample Center Contract

Statement of Philosophy

PHILOSOPHY OF TEACHING

The most important element in any classroom is the classroom environment. In my classroom, I work hard at presenting an environment in which my students can find courage. It takes courage to present one's best, for there are no guarantees that our best will be successful. I try to celebrate that courage--the academic risk--rather than the outcome. It is this risk that leads to learning. ***I believe in a relaxed atmosphere with much social and cooperative interaction. Research is now clearly showing us the importance of talk in forming new understandings. ***I believe that learners have the right to approximate as they move towards control of new learning. Immediate mastery is a rarity indeed. ***I expect my students to take responsibility for their learning. "What do you want to accomplish?" is my frequent question. This simple question places the responsibility for learning squarely in the student's lap while also saying, "I trust you to learn. I respect your decisions." I find that my students' goals in response to this question are usually in line with my own. ***I believe in a democratic classroom where students have a voice, a classroom that mirrors our society's belief in the worth of each individual. ***I believe that meaningful learning occurs when the walls between subjects are torn down. Strategies and skills are important but they must be presented in meaningful contexts that parallel life's integrated need for them. ***I believe I am not the sole

source of learning, the only teacher in the classroom. Each child comes to me with a wealth of knowledge all their own. They too are valuable teachers, and I am also a learner. ***I believe in laughter. Learning is pure delight! We giggle. We laugh. We enjoy. ***And perhaps most important of all, I truly believe that all children can learn. Unfortunately, all children do not believe this about themselves. That is when the toughest teaching we do occurs. It takes patience and confidence to lead these children to the courage that will allow them to stretch, to take risks, to learn. ***Like John Dewey, I do not believe school should be an imposition upon children. We are there for the children and the needs they have today. We must meet our students where they are, not insist they meet us where we are. It is not my job "to prepare students for life". It is my job to guide students' growth; their life is now.

My classroom environment is what makes me an effective teacher. The respect I have for my students and the pleasure I feel when with them is honest. Watching my students become independent learners and develop as a cooperative team is a personal reward that cannot be described. In addition, my students challenge me. They teach me. They show me so many things, if I am willing to observe them, listen to them, and hear what they are trying to say. However, the 'greatest reward of all occurs in that whole-face grin on a child that says, "I'm happy to be here."

Theme Planning Form

name Sun, Earth, Moon

Objectives Students will learn ^{about} the interdependence of the sun, earth, moon and be introduced to the solar system.

Poems/Songs/Chart Stories

"Sunflakes", F. Asch, p. 26, ... Popcorn
"Taking Turns", N. Farber, p. 83
Talking Like the Rain
"The Night", M.C. Livingston, p. 86
Talking ... Rain
"The Planets of the Sun" - song
Debussy's "Clair de Lune"
Holst's "The Planets"
Star Wars music: soundtrack

Books

Shadow, R. & N. Dorn
Magic Schoolbus in Solar System, J. Cole
Planets in our Solar System, F. Bradley
The Sun's Day, Gerstein
13 Moons on Turtleback, Bruchac
UFO Diary, Satoshi Kite-nara
Earthlets, J. Hillis
Stick Horse, K. Ramey
The Mountains of Tibet, Gerstein
Arrow to the Sun, Mc Dermott
Earth, Seymour Simon
If you Were an Astronaut, Moeck
Sun Up, Sun Down, D. Gibbons
Light, D. Crews
By Franklin Bradley:
Sunshine Makes the Seasons
What the Moon is Like
The Moon Seems to Change
Arrow to the Sun, Mc Dermott
How Much is a Million?

Social Studies/Science/Health

✓ Dramatize: How the earth, sun, and moon interact.
Brainstorm occupations associated w/ space and fill out a job application for one.
\$ Begin by making charts of what already ^{sun} know: earth, moon.
Draw 3 pictures of the same place.
Show the sun at 9:00, noon, 3:00.
Stamp a clock face on each one.
Use globe and flashlight to show day/night. (Darked room.)

Math Read How Much is a Million?

Learn the sequence of numbers to millions...
ones, tens, hundreds, thousands, 10 thousands, 100 thous., millions.
(93 million miles).
Find large numbers in newspaper to chart and read.

Textbook Selections

Science textbook -
Shadow, p. 140-147
The Moving Earth, p. 166-175 ✓
The Moon, p. 176-183
Ask a Scientist, p. 150-151

✓ Read Stick Horse. Inesh
where you'd like it to take
you. (Coop expo)
Creative Teaching Press Managing the Whole Language Classroom

Art Activities

van Gogh's "Starry Night" -
Create own starry night
painting.

Write a poem to music of
Hilbert's "The Planets" and/or
Debussy's "Clair de Lune".

Make a model of the moon's
surface with clay and rocks to
punch craters in.



Center Activities

Computer: Early Addition, Game 4
Theme: jigsaw puzzle (space shuttle)

Writing: Make a picture dict.
of space words.

Math: Graph how many moons
each planet has.

Science: Browse and make 4 or
more fact cards.

Social Studies: Make a map of
solar system.

Reading: Use clues to correctly
match aliens to their names.

Art: Look at how sun's been
depicted throughout times in
art. Create own version of sun.

Just for Fun: word search.

FYI: Neil Armstrong worksheet.
(reading test reading)

Special Events

Jon Goldman, speaker:
"Mr. Space".

Homework: Space Tic-Tac-Toe

Language Arts Activities

Write a science fiction story
after seeing examples:

LIFO Diary, Earthlets, Stick
Horae, Arrow to the Sun,
Magic Schoolbus, Mts. of
Siberia.

In cooperative groups or as WG,
create ABC books on solar
system.

Reading groups: Brunley's
Planets of the Solar System, &
Cole's Magic Schoolbus, ...
for discussions, strategies,
reading practice.

Read Sunshine makes the
Seasons. Brainstorm words
we'd no longer need if
no more sun. Chart them.

Read "Sunflakes". Make a
list of compound words,
words with suffixes,
rhyming words.

Read "The Moving Earth" in
science book. Draw sun
& earth. Color earth as day &
night.

Read "The Moon" in science text.
Discuss questions at end
of chapter. Do in coop. groups.

Read "Ask a Scientist" in
text. Predict Dr. Beari's
response first; then read
to check.

Learn "Taking Turns". Illustrate.
Read "The Night". Illustrate
the figurative language.

Site I

LESSON PLANS

Daily Lesson Outline

Date: _____

Day: M T W Th F

Special Classes: Art _____ Library _____ Music _____ P.E. _____

Speech: _____

Reading Specialist: _____

FOCUS: _____

Resource: _____

Other: _____

PLANS FOR HELPERS:

MORNING BUSINESS: Do the checked items. (15-45 minutes)

- ___ Pledge, attendance, lunch count, announcements
- ___ Change helpers
- ___ Morning Message (writing demonstration)
- ___ Math Board (calendar, graphs, data collecting, counting)
- ___ Journal writing
- ___ Math Mini-lesson:

___ Language Mini-lesson:

___ Student sharing: _____

___ Other: _____

SPELLING (10-15 minutes)

Pretest

Test

triangles spelling dictionary partner spell read-write-check

READING GROUPS (45-60 minutes)

1.

2.

3.

4. Contract checks.

5. Student Sharing:

puppet show _____

play _____

reader's theater _____

author's chair _____

project presentation _____

other _____

SHARING CIRCLE: Teacher directed. (45 minutes)

Poetry review: Choral reading of familiar poems for pleasure.
Emphasize expression.

New poetry:

Word and structural analysis:

Literature:

Extension:

WRITING TIME (20-40 minutes)

- Set-up individualized spelling
- Continue writing projects

W.E.B. READING: independent reading (20 minutes)

CONTENT AREA

READALOUD: Chapter book.

MATHEMATICS (60 minutes)

Strand _____
Activity Lesson(s): _____

Materials:

Problem Solving:

Tubbing Stations for

NOTES:

Student Assessment Documents

SPELLING EVALUATION

Mrs. Kolakowski's Class

1st 6 weeks

Date: 10/20/92

Student's Name

CarolineSelf-Evaluation Teacher Evaluation ✓

	Consistent	Inconsistent
1. Proofreads for identification of misspelled words		✓
2. Attempts standard spellings <i>will give it an initial good try.</i>	✓	
3. Uses spelling dictionary <i>To record her spelling words only so far.</i>	✓	
4. Consults sources for correct spellings		✓
5. Learns weekly words	✓	
6. Spells appropriately on dictation tests	✓	
7. Contributes to phonics charts	✓	
8. Applies phonics generalizations in invented spelling	✓	
9. Tries to improve	✓	
10. Shows improvement	✓	

Report Card Grade G

O = 9-10 consistent

G = 8 consistent

S = 7 consistent

N = 6 consistent

U = 5 or less consistent

Caroline is writing volumes compared to the other kids but she writes fast and furious to keep up with her thoughts. Spelling and mechanics of writing (complete sentences, caps, punctuation) aren't priorities yet. She's still writing for herself instead of an audience. This is normal at this stage but we do want to start nudging

Parent Signature:

Donna Hudson

her towards thinking of her reader(s). - You are absolutely right - we'll encourage her to pay special attention to these

Sample
page from
Anecdotal
Records.

9/9 Char. Cluster about self: +10
9/9 Dictation: Inconsistent caps - within sent., too
9/11 Good reader. "tough" read
fluently. Literal comp. Doesn't
know why chose books.

10/2 Initial caps + periods correct.
Dictation Includes caps w/in sentences though.
 $\frac{25}{32}$ + 5 pts were lost for caps
w/in sent.

11/6 Dictation: $\frac{2}{4}$ caps but $\frac{4}{4}$. and ?
Perfect spelling. Neat
handwriting. No caps w/in
sentences. $\frac{24}{26}$

11/16 Math: Counting probs. Doesn't
have a system when counting a
cluster.

		x	x	x	
		x	x	x	
		x	x	x	
		x	x	x	
		x	x	x	

 Counts randomly
 "Do you have ten?" X
 + must
 recount several
 times to check. Doesn't move
 the manipulatives.
 - Also, if kid 3 + dice said
 add 5, would sometimes count
 her 3 + add only 2.

Site 1

Sample Reading Contract

Getting to Know the World's Greatest Artists

by Mike Venezia

Assignment: Do all.

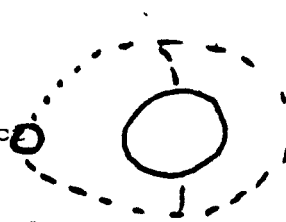
- ___ Reading log: date, title, author, five questions about the book. Begin each question with a different first word.
- ___ With the other members of your group, make a bulletin board so the class can learn about your painter. DO NOT BEGIN UNTIL MRS. K. HAS SHOWN YOU HOW.
- ___ Learn to read three pages perfectly and read them to Mrs. K.
- ___ Handwriting book: Choose 4 pages in a row to do NEATLY. Grader: ___

Challenge: Do two or more.

- ___ Make a character cluster about your painter.
25 true facts = a new pencil
- ___ Do a sorting words paper. Use your artist's book.
- ___ Learning Log: Write a detailed description of one of the paintings in the classroom. Write the painter and the title.
- ___ Read the box on the back cover about Mike Venezia perfectly to Mrs. K. Then, tell her what it means. Find Chicago on a map.
- ___ Draw one of the paintings your painter painted. Artists often learn how to paint this way. Take lots of time. Include all the details.
- ___ Spiral notebook: Look at one of the paintings in the classroom. Write a poem about it. Date and title your poem.
- ___ Read one of the books by Philip Yenawine. (The books are Colors, Shapes, Stories, and Lines.) Tell Mrs. K. what you learned. Show her how this is important in your painter's work.
- ___ Do an "Artist Fact Sheet". Mrs. K. has the paper.
- ___ Compare your artist to one of the other artists we are studying. Ask Mrs. K. for compare/contrast paper.
- ___ Make a cartoon to teach others about your artist. Mrs. K. has the paper.
- ___ Do a cause/effect paper.

STUDENT'S
COPY: I initial
each # as it's done &
write comments (except by
in the space)

Site I
Sample Center Contract



UNIT: Earth, Moon and Sun--The Perfect Trio

Progress Record

"Contract"

Do as many as you have time to do WELL!!!

1. Computer: Space Addition
Write the date you did this center here: _____
2. Theme Center: Jigsaw puzzle.
Write the dates you worked on it here:

3. Writing Center: Make a picture dictionary of space words.
4. Math Center: Chart and graph how many moons each planet has.
5. Science Center: Browse through the books and make 4 or more fact cards.
6. Social Studies Center: Make a map of the solar system.
7. Reading Center: Use clues to correctly match aliens to their names.
8. Art Center: Look at how the sun has been depicted in art throughout time. Create your own version of the sun with the scraps in the box.
9. Just for Fun: Word Search.
10. Reading: Do the worksheet on Neil Armstrong.

With-the-class activities:

- * Write a poem to the music of Holst's "The Planets".
- * Dramatize how the earth, sun and moon interact.
- * Participate in reading group. Book: (title written here)
- * Write a science fiction story.

APPENDIX B
SAMPLE DOCUMENTS FROM SITE II

Philosophy of Teaching

Sample Reading Contracts

Activity from After-School Math Club

Site II

Statement of Philosophy

PHILOSOPHY OF TEACHING

I believe all children can learn, and I believe it is my responsibility, as a teacher, to provide a nurturing, positive environment for the children to learn. Many of the children today are living in a dysfunctional environment at home. These children are being forced to face very "adult-like" issues, such as alcoholism, drug dependency, divorce, loneliness (our latch-key kids), or they live in an environment that is insecure and lacking affection and/or support. I, as a teacher, have to provide an opportunity for these children to be successful at learning by making their day at school positive and rewarding. I must first teach them coping skills, and let them know they are loved, and that they can achieve. Once everyone in the classroom trusts each other and feels a sense of belonging, we can begin to learn. This mutual respect is necessary because the children will continue to work together cooperatively in groups. In addition to cooperative learning, I believe in providing hands-on experiences, consisting of problem-solving situations, and evolving around learning life skills.

Sample Reading Contract

"Mystery of the Plumed Serpent"
Chapters Four - Five

Define Vocabulary Words: (Use context Clues)

evidence illegal suspicious amiably Quetzalcoatl Abuelita

Questions for Discussion:

1. Why did Elana, "Never want to go back to Number 24?" Would you want to go back? Why?
2. Why do you think the Pet Shop was closed at 4:00 p.m.?
3. How do Michael's feelings about Elana change in Chapter 4? Describe.
4. Why do you think the author chose Elana as the one to discover the treasure as opposed to Michael?
5. List the many, varied feelings Elana had during this part of the story.
6. Should the twins have gone to the police about the golden snake? Explain.
7. Was it right for Michael and Elana to "lie" to grandma before visiting the museum? Explain.
8. What do you think happened to the golden snake? Support your answer.

Sample Reading Contract

"Mystery of the Plumed Serpent"
Chapters Two - Three

Questions for Discussion:

1. Why did the author choose the title of Chapter Two "A Peculiar Pet Shop"?
2. List the many, different clues that told Michael that the two men were not pet shop owners.
3. Why was Grandma's reading of the paper the "high spot breakfast time"?
4. What is the hidden meaning of the sentence in the last paragraph of page 32?
5. Elana did not think people would come to a pet shop called "Pet Shop". What do you think? Why do you think the owners of Number 24 called it "Pet Shop"?
6. Before reading Chapter 4, predict what you think might be lying in Elana's palm.

Assignment: Create a new name for the pet shop in Number 24. Design an advertisement that would attract customers and persuade people to shop there.

Site II
Activity from After-School Math Club

MATHEMATICAL OLYMPIADS FOR ELEMENTARY SCHOOLS
OLYMPIAD 1 - NOVEMBER 17, 1992

1. Time 3 minutes

When I open my Math book, two pages face me. If the sum of the two page numbers is 317, what is the number of the very next page?

2. Time 5 minutes

The sum of the ages of Alice, Betty, and Clara is 29 years. If Betty is 4 years older than Alice and Clara is 6 years older than Betty, what is Alice's age?

3. Time 5 minutes

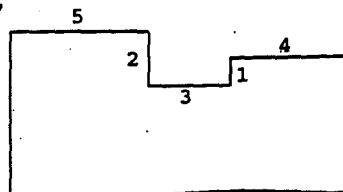
A car can travel 1 mile in 1 minute 12 seconds. At this same rate, how many miles will the car travel in 1 hour?

4. Time 5 minutes

Henry was able to buy some 23¢-stamps and some 15¢-stamps for a total of exactly \$2.50. How many 15¢-stamps did he buy?

5. Time 6 minutes

In the figure at the right, all corner angles are right angles and each number represents the unit-length of the segment which is nearest to it. How many square units of area does the figure have?



APPENDIX C

Confirmability:

Examples of Raw and Coded Data

Establishing and maintaining an audit trail aids in establishing confirmability for qualitative studies (Lincoln and Guba, 1985). This trail enables readers to understand how data progressed through the stages of raw data, coded data, data reconstruction and synthesis, and the thoughts of the researcher as this process unfolded.

While the use of narrative inquiry helped inform readers of this process throughout much of this study, this trail does provide a more concise and focused view of this spiraling approach to content analysis and verification. The following raw data is an excerpt from an interview with Titus.

Sample of Raw Data from Titus, Interview 1

T=Titus P=Pat

P ...And we're talking to our pseudonym...

T What is my pseudonym? Did you decide?

P No, do you have...

T Nooo! I don't have a pseudonym!

P O.K., ah...O.K., and we're working with Titus today and we're talking a little bit about the differentiating that we observed this morning. Ah, this morning we were looking at basic overall differentiation within the classroom using a basic whole-language, thematic approach, a number of these things were noted. Um, and I guess my first question to you is, "What kind, uh, How do you view differentiation?"

T Well, I believe, first of all, that every child has a right to be taught at their own ability level. And, um, I see two ways to accomplish that when you've got a heterogeneous classroom, and that is that one way, that we mentioned this morning, is to give everyone the same assignment and evaluate them differently. And the other way would be to give them all individualized assignments and expect mastery. I do, I guess, a combination of both, although I guess I prefer to lean toward giving everybody the same assignment but evaluating them differently. Because, I don't think it's as noticeable to the kids. Because if everybody's got the same assignment, they think they are all the same.

P O.K., ah, and I saw one type of differentiation this morning, and I guess as I was leaving you were saying that this was an atypical day and that the afternoon was totally different. If, I, ah, came back at other times, what types of other things would I see going on. I guess let me get specific. A lot of things that I observed this

morning didn't come out as a total observation...I guess as I walked around the room and talked to one little girl, she proudly shared that she and another little child had poetry books...and they were the only two children who had poetry notebooks or logs that they were writing their poems in...

T Well she may think that they are the only two! (Laughter)

P Oh, O.K.! (laughter)

T 'Cause I don't know what in the dickens you are talking about! This, o.k., I 'betcha...

P She sits...her name, I wrote it down because she told me...

T I bet it was Jessica...

P Jessica wants to be a poet...

T She wants to be a poet...and she has a spiral notebook. And in her spiral notebook she has mostly poetry instead of narrative stories, fictional stories. Other kids will write stories; Jessica loves to write poems. So she has named it her poetry book!

P Ooo-kay...

T So this is Jessica's...

P Alright...

T Interpretation. I have just let it be. You know, that's fine. We're writing!
(laughter!)

P That clarifies that! (Laughter!)

And I guess, too, you pointed out that the spelling lists were different and I took a note of that as I walked around.

T They are individualized. Really, you saw this morning, in a whole language primary program, there really are four components. And you saw several of them this morning, but you didn't see one of the more important ones, and that is done after lunch. You saw the reading groups, you saw the sharing circle where we do whole group activities, you saw some writing time, but you didn't see the independent reading time, which is like sustained silent reading, only with accountability. Because then, well actually, you did see the end result, because when Mrs. Rooney was pulling kids back there, they were bringing back the books they've read independently in class and they were having conferences with her on those books.

P O.K.

T So that's a differentiation thing, too, because these children will pull books that they can read. So I guess my feeling about the morning and the afternoon is that the morning, I tend to do more whole...everybody gets the same assignment...

P Right

T and in the afternoon it tends to get more individualized. I really...they both have their place. But I guess I, I don't know if it's because I enjoy it or if it's because I believe it's more important, but I enjoy giving the same assignment to everybody and evaluating differently.

P Right

T So I tend to prefer my morning time!

P O.K.!

T Not used to my afternoon, I'm not sure why.

P I was thinking about the types that I saw this morning, and I was looking, I was trying, to go from the whole group differentiation to the individualized and seeing, o.k., what from this was being individualized, and um, I saw a lot that was I guess individualized by student interests, and then I was wondering, O.K., the dichotomy, of being individualized from student interests to individualized through student needs. How do you, ah, work with that?

T Ah...I do, I guess, Oh, god, how do I work with that? That's a good one...a good question...

P For example, like I did not see math today.

T No

P Maybe we could talk about that for a minute.

T And you really never saw like a phonics lesson, or a grammar type lesson, either, cause...

P or a structured writing lesson in which some kids already had the concept and were ready to move on...

T You're right, you're right...

P And so...it was a much more open-ended and they naturally gravitated toward...

T I guess...and some of that has to do with this class and the placement we are at. These kids came in not being able to even write a sentence. Our first grade teachers are not writers. So where a lot of the second grade classes might be ready for the writing process, my kids are not.

P O.K.

T They are still struggling to get fluency going, and so there's not...I backed off, and really emphasize a lot of fluency. Try to give me one or two more thoughts...we're still at that point!

P Well, I noticed that too.

T Ahhhh!

P At the end of your, you did the whole group lesson, and that was good because I could watch the progression of a lesson, and what was going on in-between. Um, the evaluation I found interesting, because there again you gave the students choices.

They had four choices of an evaluation type of assignment to do, which meant learning styles and interests again. Um, and then, too, you followed that up. As the students worked, you floated, you helped them get started, made sure everyone was successful there. And then the students checked back with you. And there again, your comments were to some of the students, "O.K., give me two more sentences...What else can you remember about him?...One little girl said, "I was going to do a picture here if I left enough space," and you said, "I think you're ready for it!" Um, to another child you answered, "This is excellent. I'd like some periods." And before you sent the child back to add the periods you said, "And where would you put the periods?" to make sure he understood the skill.

T Some kids can go back and add the periods automatically, and some I know, they know where they go!

P So maybe the thought I'm coming to is there's a lot of informal individualizing going on...

T Yes and there is. Because you're talking about a formal evaluation, and in my mind that lesson was more for practice. A type of practice. So I was not looking at it as a type of formal evaluation time.

P Of the story.

T Yea, of the story. But it could of been used...sure it could, sure it could...I tend to use a lot of anecdotal records, and I write those when they come to me for like their contract checks. And I've got them right there, and I can conference with them quickly! briefly! and I can make an anecdotal record of where we are. Um...someday I need to probably get that stuff out and go over my charts and stuff and all that so you can see how I've mapped out...

P That would be helpful...

T and see all the progress of the kids.

P That would be good. Because you see that I'm picking up all the informal and right now I'm at the point that in order to continue I need to know what, um, systemic or planned type system...

T Hold on, let me get you a copy of several things. I'm not sure I pulled a good example, but we'll take J. This is a copy of my anecdotal notes to myself of some of his progress with reading...specifically...now, some of it involves writing, too.

P Right

T He completed his contract. Now this was at the beginning of the year. He wrote three questions out of five. Then I got two statements. Uh, he's very confused about questions and statements at that point. Now, later on I got, down here, I can tell by my own handwriting that he's correctly giving me five questions. He's still omitting some capital letters on some of his questions, but I'm getting my five questions. So I've got my anecdotal records to kind of keep me going. What they did well, ABC order is noted, um, you can graph, and..

P And so do you use these for groupings or sort of....

T Yup, yup...and a lot of individualized stuff. Because they come to me with their work, and I've got them at that moment.

P Right.

T And I can look at it myself and get it corrected immediately, or send them back to fix it, or fix it and now go compare it to somebody else's, and all the elements are there, and there's a lot of this impromptu, teachable moment kind of stuff.

P Right, right.

T Um, I find that works best for me. Because I'm not one to organize a lot of stuff. Now I will take a group, and we'll go and work with cause and effect for a week, and from then on I'll pretty much individualize through the contracts. Who needs help, and whose got it.

P Right, right.

T I do checks. Um, what else. As far as doing little workshops, sometimes I do that, too. Or I'll send them off to the reading specialist. Take these five kids today. They need to work on cause and effect and here's how I suggest you proceed.

P O.K.

T She's great! So, ah, that...keep asking me questions!

P O.K., I'm trying!

T Where do I go from?

P Let's think about--we have the enrichment picture here. And we've got the individualizing within the enrichment. Do you have kids you feel you need to

accelerate any material for? or the reading books, are they too easy for any of the kids that might go and use encyclopedias or something else for some of their studies.

T Uh, in the past I have. This year I do not. I have Talent Pool this year, but there is not anybody that we are ready to identify. This class, ah, I did a simile lesson with this class yesterday that I always do in January, and this class, I couldn't get a single simile out of the whole class.

P O.K.

T And in the past, I've gotten just fantastic stuff that just goes. So the personality and make-up of this class is just more developmentally delayed. And so I don't. This year! I have in the past, and we've pulled in all kinds of stuff. I've got books on the counter that these kids will take and just thumb through for the pictures, but I've had kids in the past that would just take those in their independent reading time and do extra projects with, or projects that they would just substitute in place of something else on their contract.

P Well let's talk just a little bit about the talent pool kids that you have. Can you elaborate on any of them? Where do you see them?

T Well, I've got several potentials. D and J are good. D and J have not had a lot of nurturing, so it's hard to say at this point because it's not consistent. You get glimmers every so often. I'll get a glimmer of brilliance, but then I'll go for two or three weeks of just ordinary.

Samples of Coded Data

Initially, I coded all information using the matrix developed to identify the existence of content, process, product, learning environment, or affect strategies present in the classroom or discussed in the interview. This was very time consuming, and reached a point where my coded segments appeared virtually meaningless. At this point, I sorted my content, process, product, etc. codes to look for emerging themes that might indicate why the teachers were applying the concepts of differentiating the way they did. These themes indicated initial thoughts about the rules teachers were applying to their lessons when they differentiated, their personal practical knowledge about teaching, and the routines they employed to deliver instruction. I then coded the data for these themes using the Ethnograph, resorted segments, and did a member check with my respondent to determine whether or not they concurred with these themes. What follows is a sample of data coded from my first interview with Titus which includes the original strategies of differentiation, and the emerging themes for teaching in general and differentiating instruction for gifted learners.

SC: RT.OPEN

#-RT.OPEN

: T I've created this monster, and now I'm 616 -#

: trying to suppress it! It doesn't quite 617 #

: make sense all the time! Ok, so this is 618 #

: kind of like my opening exercise. This 619 #

: is what I am going to do for the day. 620 #

: #

: P Ok 622 #

: #

\$-RT.LANG

: T Student sharing, J had the poetry, but 624 # -\$

: we did that later in the day. 625 # |

: # |

: P I noticed you had students picked out 627 # |

: ahead of time for that? 628 # |

: # |

%-T.INDIVST

: T Yes. They each have a day assigned. 630 # | -%

: But they are not all doing it. That's 631 # | |

: why I called on several. "Do you have 632 # | |

: your book today?" 633 # | |

: # | |
 : P And they knew that they were supposed 635 # | |
 : to? # | |
 : # | |
 : T Their days are passed. And their 638 # | |
 : parents know it, and they have not come 639 # | |
 : in. Letters go home to parents about 640 # | |
 : this. 641 # -\$ -%
 : #
 : P Oh...and what can they share at that 643 #
 : time? 644 #
 : #

%-RT.LANG

: T Um, at this time, usually it's some 646 # -%
 : kind of an assignment. Originally, the 647 # |
 : first one that we did, we talked, um, 648 # |
 : something went home to parents that 649 # |

*-T.CONKNOW

: speaking before a group was important. 650 # | -*

@-ASN.ORAL

: Presenting something. And the first one 651 # | -* -@
 : was on presenting yourself. Bringing in 652 # | |

: your favorite toy, or a picture of your 653 # | |

: family; something of your choice. And 654 # | -@

: then the next one was, you shared a 655 # |

*-T.INDIVST

: hobby. Now each time, they are not all 656 # | -*

: doing it. Next time we'll be bringing 657 # | -*

: in something that the class will 658 # |

: estimate. And this time they are 659 # |

: supposed to bring in a poem that they 660 # |

: read and that they've practiced. And 661 # |

: just something for one or two minutes. 662 # -%

: #

: P And did they say why they didn't? 664 #

: #

%-T.INDIVST

: T Um, most of them, you know, it's "My 666 # -%

: mom didn't take me..." It's always 667 # |

: their mom's fault. She didn't get me to 668 # |

: the library, or... It's a lackadaisical 669 # |

: part. I think the kids are not taking 670 # |

: the responsibility, and neither are the 671 # |

: parents. And the letters are going 672 # |

: home, and they know their day. 673 # -%

: #

: P Right. That's disappointing. 675 #

: #

\$-T.INDIVST

: T And there's others. Like this other 677 # -

: little girl. She was absent her day, 678 # |

: and so her first day back, she brings 679 # |

%-T.CLASS

: her book with her. She's ready. So 680 # - \$ -%

: there's about 3 or 4 out of 27 who are 681 # |

: just not. But then the others just 682 # |

\$-RT.LANG

: can't wait. They get excited! And so, 683 # - \$ -%

: then, we usually do some kind of a 684 # |

: spelling practice every morning. You 685 # |

: know, just briefly. Today they had to 686 # |

: get their words in their spelling 687 # |

: dictionary, which you saw when they came 688 # |

: in. 689 # |

: # |

: P And so these are the words that they 691 # |

: have on their list. They are 692 # |
 : individualized. 693 # |
 : # |
 : T Yeah, taped on their desks! 695 # |
 : # |
 : P Ok 697 # |
 : # |
 : T And lists also went home to study. 699 # |

%-PROD.AUD %-ASN.DRAMA

: And then reading groups. And, uh, 700 # | -%
 : sometimes at the end of a week or at the 701 # | |
 : end of a unit, the kids will have things 702 # | |
 : like puppet shows or plays that they've 703 # | |
 : put together that we need to share. 704 # - \$ - %
 : #
 : P And then, what kind of audience do 706 #
 : they have? 707 #
 : #

\$-PROD.AUD

: T We do it for the whole class! And, 709 # - \$
 : um, Mrs. Limerick, Mrs. Limerick 710 # |
 : sometimes gets caught up in it and stays 711 # |

: extra long so she can watch, too. 712 # -\$

\$-PRO.SELFDI

: Because they're kid productions. A lot 713 # -\$

: of time these productions and things, I 714 # |

%-PHIL.PER

: don't see until they perform them. I 715 # -\$ -%

: want that play atmosphere. So it's not 716 # |

: prepared for someone else, it's for us. 717 # |

: And we all laugh and clap and have a 718 # |

: good old time. So there's that kind of 719 # -%

\$-T.INDIVST

: stuff. One child said to me, J said to 720 # -\$

: me, "Tomorrow is my day for the poetry 721 # |

: reading, and I wrote a poem. Can I read 722 # |

: that one?" And I said, "Absolutely." 723 # |

: So tomorrow we are going to get J 724 # |

%-RULE.GEN

: original work. So it's the three or 725 # -\$ -%

: four that you tend to focus on that you 726 # |

: really shouldn't. Cause there are that 727 # |

\$-RT.LANG

: many more that are with it. So there's 728 # -\$ -%

: the sharing circle, which you kind of 729 # |

%-T.CONKNOW

: saw, but because of time today I did not 730 # |-%

: have a chance to do a word or structural 731 # | |

: analysis lesson, but I had spent most of 732 # | |

: the morning yesterday with similes, and 733 # | |

: it didn't work. And so I would have 734 # | |

: followed up on it today, but we were 735 # |-%

%-T.CLASS %-EVL.TCH

: just over their heads, so I just kind of 736 # |-%

: canned it and I need a day to re-group 737 # | |

: and re-think them. We are not ready for 738 # | |

: that kind of stuff. Um, but we did some 739 # |-%

: poetry review and worked on a couple of 740 # |

: our poems and I read the Monet book, 741 # |

: which was their piece of literature. 742 # -\$

: #

: P And those are the same books that the 744 #

: children are reading? 745 #

: #

\$_RT.READ

: T At the moment they are. Tomorrow I've 747 # -\$

: got another Monet book called, Linet in 748 # |

: Monet's Garden, which I will read. 749 # |

%-T.PEDAGOG %-T.CONKNOW

: Usually I read that book. I want them 750 # -\$ -%

: to see me read, as a model. It's a 751 # |

: chance for me to model reading, and the 752 # |

: whole class can see me, but that little 753 # |

: group can actually hear those words 754 # |

: another time. And then, Monet, I have a 755 # -%

\$-RT.READ

: lot of things. I have extra books. 756 # -\$

: Let's see, there's two Rembrandt books 757 # |

: up there. So that after I had spent the 758 # |

: day with their reading book, then the 759 # |

: next day I came back and followed 760 # |

: through with some other Rembrandt 761 # |

: literature. So, um, it's not 762 # |

: necessarily their reading book...usually 763 # |

: it's not. Usually. Today it was. 764 # -\$

: #

: P I noticed the pictures were so pretty. 766 #

: #

\$-RT.READ

: T Usually, this time is not. This is 768 # -\$
 : probably only one of the two times a 769 # |
 : year. 770 # -\$
 : #
 : P Well, you have so many different books 772 #
 : going on, too. 773 #
 : #

\$-RULE.GEN

: T Yeah, and its a chance for me to get 775 # -\$

% -RT.LANG

: to everyone with it. And then, some 776 # -\$ -%
 : kind of an extension, which could be a 777 # |
 : discussion, or it could be going to our 778 # |
 : seats and doing a study map or 779 # |
 : something. Creating something. 780 # |
 : Um, now the writing time today became my 781 # |
 : extension. And then we go to lunch and 782 # -%
 : come back from lunch and that's our 783 #

\$-CO.INTERDI

: independent reading time. Um, content 784 # -\$
 : area, which we didn't get to today, but 785 # |

: usually get to. I had planned on doing 786 # |
 : some map reading. We're supposed to 787 # |
 : teach a European country. Well, this is 788 # |
 : a perfect unit to work in a European map 789 # |

%-CO.INTRGSK

: with. So we're just finding countries 790 # | -%
 : on the map and finding whether they're 791 # | |
 : north or south of this one, or east or 792 # | |
 : west. Making a key as to who lived 793 # | |
 : where, that kind of thing, so we're 794 # | |
 : working with that. Reading aloud a 795 # | -%
 : chapter book, but today we read aloud a 796 # |
 : book, The Seven Chinese Brothers, which 797 # |
 : is around the room somewhere. And then 798 # |
 : later they went to art, and when they 799 # |
 : came back from art they did a problem 800 # |
 : solving activity based on The Seven 801 # |
 : Chinese Brothers. Seven brothers, if 802 # |
 : they each ate one fish at every meal, 803 # |
 : how many fish would it take to feed the 804 # |
 : brothers for a week. (laughter) 805 # - \$
 : #

: P (laughter) Ok! 807 #

: #

\$-T.CLASS

: T In cooperative groups, it took us 45 809 # -\$

: minutes to figure that one out! (more 810 # |

: laughter!) But we got it! Most of them 811 # |

%-CO.PROBSLV

: got it, or at least had a plan that 812 # | -%

: would have been successful if they had 813 # | |

: enough time. So that's kind of, what my 814 # | -%

: lesson plan... 815 # -\$

: #

: P The format that you follow... 817 #

: #

\$-DOC.PLAN

: T Yes, it's got all these sections. And 819 # -\$

: I don't do them all every day, but it 820 # |

: gave me a place to put them all in. 821 # |

: Reminds me that I'm supposed to be doing 822 # |

: these things. 823 -# -\$

Coding Guide

By this point, the reader is probably wondering what all these codes refer to. One of the shortcomings of using the Ethnograph is that codes need to be short, and the extension needs to be longer than the description. The result is that phrases cannot be used to code data, and the researcher must be very specific in these initial codes. It was initially a bit difficult to code segments in an understandable way without constantly referring to the coding guide to remember what was supposed to become clearer by coding!

Using the Ethnograph had its advantages and disadvantages. The advantage was once all of these codes were entered, refined, and re-entered, I could sort the data and extract the actual information quickly and easily. To find my larger themes, I printed out these sorted segments, clipped them together, and looked for emerging themes. With all of the segments printed out, it was easy to establish an order for the data, and it was easy to spot when data was mis-coded or out of place. I thus felt confident in the credibility of my themes.

The disadvantage of using the Ethnograph was that at times, I became so steeped in the particular that I worried I might be missing the forest for the trees. Codes had to be very specific, and it was extremely time consuming coding by hand, entering the codes, then updating the coded segments to allow for new codes and themes. Overall, however, the inductive nature of this study was a good "fit" with the Ethnograph. The following coding guide contains most of the codes used in this study.

CODING GUIDE

Content

abstract.....co.abstrac
 accelerate.....co.accel
 arts.....co.arts
 career education....co.career
 computers.....co.comput
 concepts.....co.concept
 enrich.....co.enrich
 ethics.....co.ethics
 future.....co.future
 integrate skills....co.intrgsk
 interdisciplinary...co.interdi
 issues.....co.issues
 math.....co.math
 personal.....co.person
 problem solving.....co.probslv
 student profiles....co.stprof
 student interests...co.stintrs
 study of people.....co.people
 themes.....co.themes
 co.theme1 (teacher's personal values)
 co.theme2 (teacher's personal interests)
 co.theme3 (standard curriculum)
 co.theme4 (student needs)
 world affairs.....co.world

Process

creative.....pro.create
 critical.....pro.critic
 decision-making.....pro.dec
 deductive.....pro.deduct
 group interactions..pro.group
 higher-level.....pro.hl
 inductive.....pro.induct
 metacognition.....pro.meta
 open-ended.....pro.opnd
 reference.....pro.ref
 research.....pro.resrch

self-directed.....pro.selfdi

Product

real problems.....prod.real

real audiences.....prod.aud

self-evaluations....prod.slfev

transformations.....prod.trans

Assignments

choice.....asn.choic

drama.....asn.drama

game.....asn.game

hands-on.....asn.hands

open-ended.....asn.open

oral.....asn.oral

written.....asn.writ

Learning Environment

complex.....le.complex
 encourage divergent thinking...le.divthnk
 flexible grouping.....le.flexgrp
 responsive.....le.respond
 student centered.....le.stcentr
 student choice.....le.stchoic

Affect

develop emotional growth.....aff.emotn
 develop global identity.....aff.global
 develop leadership skills.....aff.leader
 develop values.....aff.values
 encourages dev. of pos. self-concept....aff.slfcn

Individualized Differentiation

cooperative learning groups.....indif.coop
 curriculum compacting.....indif.cc
 daily learning agreement.....indif.dla
 diagnostic/prescriptive.....indif.dp
 enrichment.....indif.enr
 higher expectations.....indif.hexp
 IEP's.....indif.iep
 independent study.....indif.sty
 learning centers.....indif.lcen
 learning contracts.....indif.lcon
 learning extensions.....indif.ext
 student choice or interest.....indif.sch
 questioning strategies.....indif.que

Evaluation

biographical influenceevl.biog
 conclusion.....evl.cncl
 developmental.....evl.dvlop
 informal.....evl.infor
 notes.....evl.notes
 peer.....evl.peer
 philosophy.....evl.phil
 product based.....evl.prod
 researcher.....evl.resrch
 student.....evl.student
 teacher.....evl.tch

RoutinesRole of Teacher

impromptu.....rt.impromt	knowledge-giver.....tch.knowgv
language.....rt.lang	coach.....tch.coach
management.....rt.mang	
materials.....rt.mat	
math.....rt.math	
opening.....rt.open	
practice.....rt.pract	
reading.....rt.read	

Student Gifted Student = gst.

description.....st.des
 emotional.....st.emotn
 evaluation.....st.evl
 family.....st.family
 interests.....st.intrst
 math.....st.math
 motivation.....st.motiv
 reading.....st.read
 social interactions.....st.social
 talent.....st.talent

Volunteer

community.....vol.com
 parents.....vol.par
 staff.....vol.staff
 students.....vol.st

Time

future.....tm.future
 ongoing.....tm.ongoing
 link to past.....tm.linkpast

Organizers

chart.....org.cht

Rules

general rules.....rule.gen
 specific rules.....rule.sp

Teacher's Knowledge

of class.....t.class
 of content.....t.conknow
 of individual studentst.indivst
 of pedagogy.....t.pedagog
 knowledge growth.....t.growth
 personal practical.....prac.know

Philosophy

personal.....phil.per

Thoughts on Differentiation

informal.....dif.infor

principles.....dif.prin

principle 1.....dif.prin1 (same assign, evl. diff.)

principle 2.....dif.prin2 (indiv. assign, exp. mastery)

principle 3.....dif.prin3 (diff. levels, connected by a
theme)

Documents

planning.....doc.plan

Biography

education.....bio.ed

family.....bio.fam

interests.....bio.intrst

mentor.....bio.mentor

professional.....bio.prof

talent.....bio.talent

Demographics

class.....demo.clas

school.....demo.sch

Sample of Coded Segments by Theme

Once I felt confident of the themes that would become the mainstay of the study, I would add these to the database, sort, re-check, and then do a member-check with the respondent to confirm or refute these themes. I did not always go back and re-code for all of these larger themes, since by this point, I had usually generated many coded segments, cut them up and clipped them to different piles, and had handwritten comments that helped me determine how these themes and their accompanying data sets were linked to other themes and data. By this point in the study, it became meaningless to add more codes. Rather, it was more important to think and determine the relationship of these codes to the study as a whole. What follows are several sections of data sorted by the broad code, "personal philosophy," for Site II.

#-PHIL.PER

: C I believe that gifted children do 213 -#
 : need to be enriched and challenged. But 214 #
 : I also believe in an accelerated 215 #
 : approach to learning, that all children 216 #
 : need that. I don't like remediation. I 217 #
 : don't like drill and practice. I mean 218 #
 : if you can show me that you can do it in 219 #
 : three problems, then let's go on to 220 #
 : something else. So meeting the needs of 221 #
 : the gifted child in this classroom, I 222 #

: try and approach so much of it through 223 #
 : whole language, thematic, It's thrown a 224 #
 : whole bunch of twists in there. When 225 #
 : coming in homogeneous, forced to turn 226 #
 : very heterogeneous in about 3 years, and 227 #
 : then in the last 2 years being told 228 #
 : thematic, whole language. So it's kind 229 #
 : of like, "Boy!" You know, here we are 230 #
 : now with a whole bunch of different kids 231 #
 : but told better to teach them together. 232 #
 : Don't do reading groups and things like 233 #
 : that. But with that came the 234 #
 : accelerated approach to learning with 4- 235 #
 : Matting. To me, that has solved the 236 #
 : problem of having such a mixture of 237 #
 : children but trying to teach them in a 238 #
 : whole language sense. 239 -#

#-PHIL.PER

: saying, "Well I agree with so and so, 786 -#
 : and so again that was kind of a neat 787 #
 : thing in that they did listen very 788 #
 : carefully to what the others said, and 789 #

: when it was their time. 790 #

: #

: C And you can...disagreeing with 792 #

: somebody is not disrespectful. 793 -#

\$-PHIL.PER

: instruction time, I believe that let's 905 | -\$

: just do some thinking here. I mean, 906 | \$

: multiplication I have told them, you 907 | \$

%-ST.MOTIV

: just have got to know the facts. So 908 | \$ -%

: I've tried to make it motivating. We 909 | -\$ -%

2INTRV1 But I refu

SC: PHIL.PER

\$-PHIL.PER

: But I refuse to hold those kids back. I 966 -# -\$

: had a professor say the other night, "I 967 \$

: believe in giving a calculator to kids 968 \$

: who can't multiply." He took his 969 \$

: glasses off and said, "I can't read 970 \$

: this. What would you give me?" And we 971 \$

: said, "Glasses!" 972 -\$

SC: PHIL.PER

#PHIL.PER

: C Because we're all going to form our 1004 -#
: own style in handwriting. I don't like 1005 #
: to spend time on that kind of thing. 1006 #
: And there's a lot of life skills taught 1007 #
: in 3rd grade, too. As much emphasis is 1008 #
: taught on responsibility and making 1009 #

\$-EVL.TCH

: choices and decision making. And I 1010 -# -\$

SC: PHIL.PER

%-PHIL.PER

: it's teamwork, and that's part of life, 1036 | | -%

: too. But, for math, we pretty much do 1037 -# | -%

2INTRV1 have prove

E: \$-INDIF.DP \$-EVL.PHIL

E: #-EVL.PHIL

SC: PHIL.PER

%-PHIL.PER

: have proven to me that they've ...I will 1179 | | -%

: go middle of the road then. I'll do 1180 | | %

: something like O/U then, or then in the 1181 | | %

: middle, there's the S then, you know, I 1182 | | %

: want them to succeed. And that's very 1183 | | -%

Excerpts from the Methodological Log

Methodological Log: SITE 1

1/13/93

A few questions came up as I observed today. Most of the differentiating was done in an informal yet experienced way. I was not able to use the first protocol until 10:30 because this was the first structured lesson. As students assembled for the group lesson, I checked off characteristics of differentiating that I had observed and recorded on the laptop from 9:30-10:30. Again, the question of planned, consistent differentiating haunts me.

During the structured lesson, which was designed to review facts and knowledge about various artists (the theme for next 2 weeks), I looked for signs of diff. Few higher level questions were asked of the class, but open-ended ones were. A grid was used to review previous knowledge. Again, I was disappointed that the grid was not used to compare and contrast artists, although one question was posed that required children to do this. (How did this artist differ in his training from the others?)

The lesson evaluation was open-ended and students were given 4 choices. The teacher walked around the room and facilitated and probed students as they worked, and when they shared their written log with her, she individualized her expectations. "Add 2 more sentences, go back and add punctuation" etc.

Her method of indiv. was based on student interests rather than need. Students chose the books and assignments that interested them, and she orchestrated the skills appropriate for each child within these assignments. Every child had an individualized spelling list.

Because I was not able to discern planned, consistent indiv. diff. for talent pool students, I scheduled an interview with the teacher for 4:15 that afternoon. Interview is on tape.

A number of good insights came out of the interview.

1. The methodology I am using will work beautifully and will lead to the results I want. The teacher felt empowered and felt that the research would allow her to learn a lot about herself. She was interested in keeping a log to help us discover insights about herself and her teaching style. She felt very comfortable with the study and wanted to be part of it.
2. The teacher has 6 talent pool students, none of which she is ready to identify as gifted. She is aware of their different strengths and abilities, but does not see them as so significantly beyond the others as needing to accelerate material in a radical manner. She has had some very gifted students in the past, but does not see this in her class this year.

For these reasons, she was not sure that she would be able to meet the study's criteria.

3. The teacher agreed that she probably did differentiate through interests, and this was a new insight for her. She said she probably does this because she considers learning to be emotional, and gets to students through this avenue first. The cognitive follows afterwards. If she has not made an emotional connection with the child, she will not push the cognitive until he/she is ready for it.

I am not sure at this point whether this classroom will meet the criteria of the study. This teacher would be excellent to study for diff. and indiv. for all students, and most definitely could be considered an expert teacher. The lack of definite gifted students poses a problem for this aspect of the study.

1/14/93

Called M, principal at R., regarding my second nomination. After reviewing the criteria for class and indiv. diff., M feels that C. most definitely will be a competent candidate. She will leave message for C. to call me at school during her planning period. Also got her home # and will call her there if she is unable to get in touch with me today.

1/26/93

Spent the morning with C. Some good stuff going on using a lot of the textbook gifted material, i.e., shared inquiry, research techniques, centers, informal groupings, and higher level questions. I was disappointed that so much was done with the whole class, and that a lot of sub-groupings were not done. For example, the whole class read the same trade book, and answered the same interpretive type questions for morning work. It would seem to me that different books should have been used, and that a different rate of the story would have been more suitable for different students. One child who had read ahead was bored during the discussion, and spoke to his buddy on the right (my left) for a good portion of the discussion time. Others did participate well, however. Did not see too much indiv. on a one-on-one basis---have set up an interview with C. on Thursday to go over a few items.

1/28/93

Had an interview with C, which went well. A few things did become evident as we spoke. She is young. This is only her 5th or 6th year teaching, and she did not possess the depth that Titus at Site 1 had. This of course came as quite a contrast. She seems to want to please, and this leaves me wondering, "Is she individualizing because it is something she deeply believes in, or is she doing it as a career move?" She is an ambitious girl, and is finishing up a degree in administration at _____. M. has put her on a lot of committees and has held her in high regard, making me believe that she will seek a spot in admin. in the coming year should one become available.

She works well with people and would do well in this field, but as I mentioned earlier, she lacks the breadth of experience that more seasoned teachers bring to their craft. She is individualizing with her gifted students, and has set up a nice program for a gifted l/d child. Her class is more homogeneous than most, and this again may be a politically astute move on M's part. This homogeneity does explain how she is able to do more whole group lessons easily. I will have to think a bit on whether she is the best candidate for site 2.

2/15/93

Spoke to Titus last night. We will continue in the study together. I transcribed the comments she made to me last week and sent her a copy of these along with a note. She is working with the school board this evening on how the Common Core of Learning will impact instruction in the regular classroom. She did say that our limited work thus far helped her to clarify her thoughts for parts of this presentation. That is good! I finished Mischler's book, Research Interviewing, and feel good about my direction as a result of reading this. Grounding my questions in the context or practice of the classroom IS very important, and will help the study retain its richness. And already my respondent's are feeling empowered! This is wonderful news, particularly in light of my conversation with Darlene this afternoon. The role of narrative, as Robert sat at my desk and rambled on about telling students' stories today, again became so very clear to me. We do indeed lead storied lives. I, perhaps, more than others! But I notice that as I ramble with my stories, others become free

and relax and retell their own, and together we come to understandings that are mutual and lead to greater links of trust. And so I believe that my ability to tell stories frees my respondent to tell his/her own, and when my ability is closed short "by a foreign host," then so, too, do the stories stop between us. It is the connection between us that is important, and as D. told me, I will need to work twice as hard as the other person to keep the connection open. In comparing the interview with Titus and the interview at site 2, it was the seasoned storyteller of Titus v. the novice, still looking for her voice, that marked the difference. Will one grow more than the other as a result of our research?

Will code more tomorrow, as I go and observe math with Titus on Wednesday. Need to go over the format of narrative with her at this time, also.

February 17, 1993

Observed math from 2:30-3:30. Good stuff, and further reaffirms Titus' ability to individualize. They were doing Math Their Way activities centered on estimation, place value, and number facts. Activities were open-ended, and Titus followed through with anecdotal records to determine where students were functioning with place value skills. At 3:30, we went into the hall and conducted an interview session to formally invite her into the study and to go over narrative methods and our roles in this study. She seems at ease with everything, and was anxious to respond to questions. I need to go over how I am coding with her, and to get her input on some

of this. The approach seems to appeal to her, for she liked the idea that it is important that she share facts like keeping anecdotal records with me. I mentioned that her tape was very valuable, and that a reason I wanted her in the study was because she has a highly articulated personal philosophy. We discussed the delays; waiting on committee and need to possibly identify students for gifted program to meet need of one committee member. She understood. I will be returning Tuesday for 9:30-11:30 block to get more info on language arts. Would like to set up one more visit with math or a content area.

February 24, 1993

Sent Titus copies of last week's interview and observation, along with ob.log started earlier which included Tuesday's observation notes. We are looking at snow on Friday, so although I have not yet gone over and deleted student names in the last observation, I sent it on so she would have it over the week-end. I will work on coding, and we will try to get together one day next week to probe into some of my questions as a result of coding.

As I work tonight, I realize I need to get some documents from Titus. Sample lesson plans, unit plans and themes for the year, and samples of anecdotal records would be helpful.

Some questions for interviews:

1. Who designed the lesson planning sheets?

2. How do you decide on your themes/units?
3. What do you think about when you are planning?

March 1, 1993

Spent the week-end coding my observations. Worked out a coding guide using my observation matrix--quite detailed, but it's working well. It was good to do on wordperfect after all my notes on index cards. I was able to sort each category alphabetically, making it easier to refer to the codes when working. I am almost finished with the second observation now. Need to add codes for management techniques, discussions with students, impressions, students interacting with students, teacher interacting with students, and others...decided I was too tired to think of these clearly now, so will work on this tomorrow. Hopefully, I'll grab a few minutes at work tomorrow to come up with some codes that will move me into this next stage.

Titus is quick! She responded to the drafts of observations I had sent her, and her comments were helpful and positive. Though I hesitated sending her my observation notes, I decided that based upon our collaborative relationship for this study design, I needed to. Explained to her about multiple realities, and that I may have missed an important sequence of action or focused on another aspect of it, and it would be helpful if she would key me in to this. Her comments again showed in-depth knowledge and concern for each indiv. student, not only academically, but emotionally and socially as well. It was interesting that she noted certain passages as "principles"

for her! This study really is flowing well...tough keeping up with, though, especially with car hunting and job...!

March 10, 1993

Have completed most of the coding so far, but feel I'm going too linear...too bogged down in details, and missing the main picture. Talked to D. about it tonight a bit. He, too, said he found himself doing this at first. Said to get back to the main picture, write down what diff. is occurring and support it with these details, and move on to the next segment. I will try to observe math Friday pm, and interview after school on some of the emotion/interest ideas, how Titus chooses her content, what she thinks about when she plans, and begin some biographical info. This will give me good meat to tackle over the week-end. Will also sort by personal philosophy and use this for grounded type questions. Off to code into computer now! (It's 10:30 pm, can't sleep because I'm feeling behind on this.)

March 13, 1993

Snow, wind and rain today. It's 2:30, and I'm finally getting started again after fiddling with fire, household items, and STEVE, who is very restless. He finally dressed and went over to Ann-Courtney's to sled.

I've re-read my methodology and have decided to put things together over the week-end so I can get into the narrative part by next week-end. Couldn't observe Titus on

Friday because R. was supposed to be out of the building, but then that got canceled.

I have three areas I want to address in the analysis:

- 1) What differentiating is occurring for
 - a. the class;
 - b. indiv. gifted students
- 2) Why these are occurring; and
- 3) How this came to be.

I should be able to complete the first two sections of this over the week-end and set up an interview protocol to mail to Titus for a session on "3" later in the week. Want to observe Math once more early in the week to further look at "principle 2" at work.

M. agreed to present at VAEG. He would have been an excellent candidate for this study except for the fact that he's in my building. Good balance of planned and informal going on there.

March 24, 1993

Spoke to Titus this evening. Will observe math again tomorrow afternoon. She said she has not had an opportunity to respond to my questions, but now that report cards are done, it is higher on the priority list. I will watch Dwight and Jonathan tomorrow. Both are being recommended to the program. Jon may be for general intellectual, now, not just writing/language. Titus said he'd done well in math this term, and it made her think about it again. She said her conferences went well, and she is going

to try some different methods in spelling. Does not feel the indiv. lists are going too well, since their spelling does not seem to be improving much on the whole. She gave them some kind of a test, and Jon scored on the 6th grade level, while Dwight was on the 4th grade level. She is going to try "grouping instructionally" in spelling. Will need to know what this is about!

As I sat in T's room with ITBS testing, I read through some material Betty had given me on curriculum compacting. Some thoughts came to me as I read and thought about Titus.

-Are some bright children happy to be singled out by given the opportunity to work on different assignments?

-Should we look first at the student's anxiety level before basing decisions on the teacher's philosophy?

-Titus seems very comfortable with enrichment, but less so for acceleration. Enrichment keeps them equal, acceleration makes them different? Need to explore this.

Also need to do more coding. My idea is:

code for enrichment

emotion

biography

student interests

folklore

arts

March 26, 1993

Scheduled to observe Titus today for math. Phone call at school. She changed her plans and was doing a video today, and would not be doing a formal math lesson. I returned her call and rescheduled the visit for Wed., 3/31. Could not come sooner because R. was out of the building on Mon. and Tues. for ASCD conference. Titus said she still had not had an opportunity to respond to my questions :*(. This is disappointing--I really need to work through this section.

March 31, 1993

Observed math in Titus' room today. It was a good lesson! Took me awhile to see the math side, but the students were very much engaged, and everything fit in together. She "read" a story called the Stick Horse, a wordless picture book about a child whose stick horse can fly. Other sci-fi characteristics included, such as 5 buttons that "program" where this horse goes in time and space. What I saw that related to g/t curr. was a very high level of abstractness, and Titus probed high-ability children to think of reasons behind her questions. Math part was to ask 10 students in the class if they would want to go back in time or to the future, and graph the results. Students were to use rulers, labels, and titles on their graphs. All were able to complete the assignment successfully with varying degrees of assistance. Some needed help organizing themselves, while others completed assignment with just a reminder to add a title. As children completed these, they brought them to Titus for feedback. Jon and Josh were asked to give 2 sentences about their graphs--they did this by relating

the information to the math concepts involved. 5 and 5 makes 10....My graph shows everyone was equal...So interpretive skills were used. Math block was at end of day, so while some finished with minutes to spare, others needed time the following day to complete this. Students prepared for home, and I left at 4:00 with Titus. She had an orthodontist appt. for her son, and said she was teaching a class at the college on Saturday, but would try to respond to my items on Sunday. I tried to let her know in as polite a way as possible that I really was ready for this info! Little Jessica share her poem with me today...good indiv. for specific talent here...she's very confident about her writing ability, and I was surprised when Titus told me she was being tested for possible LD. Can't read anything, even her own poems! You would never guess this from a quick observation of her in progress! Will spend time tonight going through today's transcript and cleaning it up...Also recorded lesson so I could add any info I may have missed.

April 6, 1993

Called Titus this evening. Getting nervous about the time lapse. She's on target!! Said she did tape on Sunday, as promised, and sent via inter-office mail on Monday. (I left school early for meeting on literacy profiles, so missed the courier). She said she included lots of documents. We agreed to touch base next week--she'll return from Easter on Tuesday--and will conduct follow-up interviews then. This will be good, since I'll have a fair amount ready for C on Tuesday.

April 12, 1993

Spent most of Easter week-end transcribing Titus' response to the questions I gave her on March 16. This response on tape did in fact get lost in the school mail, but a guardian angel got it onto J's desk, where Titus spotted it! This tape is a gem. All of the narratives are coming through, and Titus agrees that the three principles I arrived at earlier do represent her method of differentiating and teaching. At 22 pages in length, it took a awhile to transcribe. After getting it all, I listened to it again and caught a few words that were recorded wrong, and was able to make the corrections. The tape itself was 1 hour in length, so this too was a time consuming process. I got very excited listening to the tape, because once again the theme of "beliefs" comes shining through. Titus' musical heritage, her father's words and beliefs are two of the strongest influences on her. *I would guess that these are the filters that she used in grad school to further find sustenance to what she aims for and believes in, and the whole-language movement with its focus on the child gave her some concrete methods to reach these ideals she felt stirring within. I was impressed with her accomplishments, and it is interesting to note that B mentored her journey. Again, strong values, rich cultural heritage, and a mentor...what great ingredients! And yet, it is Titus' determination and her commitment that propel her into new journeys. She is also very easy to talk to, and despite her busy schedule, is unselfish with her time. These, too, are critical to her success.* To have a family with two teen agers, to publish a third book, present at various conferences, conduct training in numerous counties...she can't sleep very much!

4/12/93 10:30 pm

Read through a number of items on site 1 to prepare for tomorrow's meeting with C. Need to pull and synthesize...so I tossed ideas as I read. Many new insights are beginning to emerge. Here are random thoughts...

Titus' philosophy contains a line that perhaps portrays how we need to work with teachers, as well as students. She states, " Like John Dewey, I do not believe school should be an imposition upon children. We are there for the children and the needs they have today. We must meet our students where they are, not insist they meet us where we are." It may be true that in this study, I started out too sure of meeting teachers where I am, not where they are. After reading through Titus' last comments, I see much more clearly where she is, and understand more clearly the weight of the beliefs she carries with her. As with all beliefs, they sometimes pull us forward while also holding us back. I see a paradox in what she says. She does not like principle 2, giving students indiv. assignments and expecting mastery, yet she states that she "celebrates their differences." And yet in all of her interviews, she is forthright in saying that she wants students to perceive themselves as equals. Is that good? Is that a myth? Does she see herself as equal to the other teachers at her school? But look at what we are talking about here...BELIEFS! It is the strength of her beliefs that make her special...

I will make initial codes tonight on the interview I just transcribed, and set up a time with Titus to go over some of my questions. These are forming around the area of

"choice" and determining who is responsible for possible underachievement. My other questions are on her hesitations regarding acceleration, and the paradox of celebrating differences, yet disliking to acknowledge these through individual assignments. With these in mind, I go forth to "datalyze!"

April 14, 1993

Have continued to do content analysis on Titus' response, and am using my coding guide. Have begun to notice that within each of the "principles" lies embedded much of her personal philosophy. Student choice continues to dominate these principles, with a real aversion to treating students differently or calling attention to their differences.

Questions for Titus: At what point do you as the teacher say to the child, you are capable of harder material/assignments, and I want you to try this? How do you deal with a student who chooses to underachieve? Can we always wait for all students to feel motivated about accepting challenges, or do some need to be pushed into it (with guidance, of course)?

There is a very strong paradox coming through: You state that principle 2 is your least favorite because children can look at each other's math cards, for example, and see who is "ahead" or "behind." And yet you say that you endorse the sign over your door, "...our differences make us unique" and you state that you spend much time helping students to understand their individual talents and those of others. If a child's

talent is math and you accelerate the work for him/her, why should you feel uncomfortable about that if it is right for the child? Would the child prefer to be bored? and if so, should we allow this, or is it our responsibility to develop that child's potential? You mention developing courage in children, does it not take courage to stand out and accept the responsibility of our talents?

Excerpts from Methodological Log: Site II

Observed C. 5/5, Wednesday p.m. and 5/6, Thursday a.m. What impressed me most was the tight management of her students that appeared effortless. She showed a high respect for students by keeping her voice low at all times, never threatening them, and she read their signals very easily. They in turn wanted to please her, and did so effortlessly. "I'm getting a lot of complaints from students I usually don't hear from. It must be time for us to move to something different." She interpreted their misbehavior rather than dealing with it directly. This gave her lessons flow and never set up an "I win, you lose" scenario.

Other observations:

During the math lesson, she frequently asked students how they got their answer. This was very important to her.

Like Titus, she involved her students in the lessons as much as possible, calling them forward to the overhead, but then having them choose the next one to come forward.

Students had ownership in the room, from the sign they hung over their groups, to the materials they brought in to share, and to the use of time for sharing and time for extras they won through the behavior management system based on their cooperative groups efforts.

She is more teacher-centered than Titus, keeping the noise level down low and not giving as many management directions to the class. She did not provide choices in the assignments like Titus did, but did have optional assignments that had choices involved, such as the book report chart.

She has no problem setting up indiv. differentiation for students. She felt it was accepted by other students because they had a chance to work on it first. (Lego Logo for Adam, writing opportunities for little girl.)

She is more organized than Titus.

Her class appears to come from a more advantaged area than Titus. They are more responsive to her, dressed better, and not as anxious seeming.

Love the Sharing Bag idea! Will need to sent it to Titus!

Her lessons were broken down into more discrete segments than Titus' whole language approach. I wonder if she has a great a sense of the whole as Titus.

For me, it was much easier observing and working with C. I already felt confident about my methods, I was at ease recording as much as possible, and it is easier to work with younger teachers! Titus was easy to work with, too, but yet she need to be left in control of the research process more than C. C is more malleable, perhaps, and

willingly shared ideas she had stumbled across. She is not yet sold on one approach, such as Titus and whole-language, and that may be a difference, too.

Will analyze first two observations while in NJ this week-end, transcribe tape Monday evening, and hopefully be able to write up a "Day in Site 2" this week and have questions ready for C at end of week.

June 4, 1993

Am coding observations from C. Several things are beginning to emerge that need to be noted.

Gifted Strategies

Around the room are various displays that show knowledge of specific gifted strategies: Shared Inquiry, Steps to Problem Solving, grouping like ability students, both high and low, to work on an assignment, metacognitive routines and emphasis on **how** students got their answers, a research center that expands on theme being studied with books, artifacts, encyclopedias, and charts above that suggest possible reports/projects.

My question is how much time is actually spent doing these, when it appears that most of students' time is spent in teacher planned lessons and follow-ups, and students don't seem to be released to pursue activities at these centers in lieu of other material?

Whole Group Lessons

Much of what has been observed has taken place in whole group lessons, with modifications made for students at the lower end of the spectrum. Contracts use higher level questions of analysis, synthesis, and evaluation, yet for the most part all students read the same book, and I don't see provisions made for independent reading (WEB time) or multiple choices of books for the topic being studied. This is a true contrast from Titus, who organized and emanated from the whole-language approach. Celia seems to emanate from Gifted Strategies, but these are not as consistent due to factors that may include minimum training (no formal coursework outside of county SDS classes), lack of experience to further develop and link with other strategies in whole language (she's in her 5th year of teaching), and personal learning style which appears to be more sequential. Less noise, subjects taught more discretely, and not as many multiple activities happening at the same time. On the other hand, her classroom composition is more homogeneous than Titus', and it appears that all but four of the students can do the same reading book successfully.

Metacognitive Skills

One thread running through Celia's 1st two observations is how she models problem solving steps and process whenever possible. Chart hanging in back of room IS applied in all lessons consistently. "How did you get that answer?" 2ob1, lines 154-164, Celia tells them that estimating is good, but there is a better way to get the answer. She illustrates on board using a number sentence method to solve.

Focus on Affective

Both teachers are intent on developing leadership skills.

-sharing times (formal routine, formal and informal presentations to classmates and others on hall, sharing of learning extensions to include homework and independent work)

-students as helpers

-sensitive to students needing help/further support. Weave in with lesson whenever possible, tool to model thinking processes for all. (le.respond, te.indivst, t.pracknow, co.probslv)

Modeling Skills

Both teachers spend time modeling skills they want students to achieve. Modeling as a routine: reading aloud, solving problems aloud both formally and impromptu, and how to work cooperatively with one another.