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ABSTRACT

This report discusses the outcomes of a project that investigated elementary schools and classrooms that had a reputation for effective implementation of curriculum differentiation practices to meet the individual needs of high ability students. Using a multisite case study method, researchers conducted observations in classrooms and interviewed teachers, administrators, and students at 10 school sites to describe both the specific ways that teachers make accommodations for individual students and the factors that influence these practices. Results found that the classroom teachers implemented curriculum modification procedures, employed flexible grouping practices, provided advanced level content, or provided opportunities for advanced level projects to accommodate students' differing academic needs. At some sites, the teachers collaborated with the other teachers at their grade level or with district curriculum specialists to provide more academic challenges to talented students. In some situations, the teachers and parents described the leadership of school principals or superintendents whom they believed were responsible for teachers' instructional practices. A synthesis of the findings and themes across the 10 sites are included in the final chapter of the monograph. (Each site description contains individual references.) (Author/CR)

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# THE NATIONAL RESEARCH CENTER ON THE GIFTED AND TALENTED



*The University of Connecticut*
*The University of Georgia*
*The University of Virginia*
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## Profiles of Successful Practices for High Ability Students in Elementary Classrooms

Karen L. Westberg, Ph.D.
Francis X. Archambault, Jr., Ph.D.
Editors



The University of Connecticut
Storrs, Connecticut

September 1995
Research Monograph 95122

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**Dr. Karen L. Westberg** is an assistant professor in the Department of Educational Psychology at the University of Connecticut where she is a principal investigator for The National Research Center on the Gifted and Talented and teaches graduate coursework in gifted education and research methodology. Before joining the faculty at The University of Connecticut, she was an elementary classroom teacher, an enrichment specialist, and a gifted education coordinator. In addition to teaching and conducting research, she provides professional development training to teachers on topics such as creative thinking skills, curriculum modifications, student assessment, and gifted education programming.

## Acknowledgments

We are grateful to a number of individuals who contributed their talents to "The Study of Successful Practices." We acknowledge, first of all, the skilled researchers who observed in the schools and wrote the site profiles for this monograph: Linda Emerick, Tom Hays, Tom Hébert, Marcia Imbeau, Jann Leppien, Marian Matthews, and Stuart Omdal. In addition to appreciating the work of these contributors, we thank them for their patience in waiting for a long time to see this monograph in print. Second, we acknowledge Charles Bruckerhoff, a faculty member at the University of Connecticut, who shared his expertise in qualitative methodology when we were designing the study. Third, we acknowledge the excellent work provided by Ann McGreevy, a faculty member at Notre Dame College in New Hampshire, who edited the chapters in the monograph. Fourth, we thank Joseph Renzulli, E. Jean Gubbins, and Cathy Suroviak at The National Research Center on the Gifted and Talented for their support and assistance with this project. And finally, we express our gratitude to the administrators, teachers, and students at the 10 elementary schools who opened their doors and allowed us to observe their successful practices.

*Karen L. Westberg*
*Francis X. Archambault, Jr.*

# Profiles of Successful Practices for High Ability Students in Elementary Classrooms

Karen L. Westberg and Francis X. Archambault, Jr., Editors

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## ABSTRACT

The Successful Practices Study was an investigation of schools and classrooms that had a reputation for effective implementation of curriculum differentiation practices to meet the individual needs of high ability students. Using a multisite case study method, researchers conducted observations in classrooms and interviewed teachers, administrators, and students at 10 school sites to describe both the specific ways that teachers make accommodations for individual students and the factors that influence these practices. The researchers—Linda Emerick, Thomas Hays, Thomas Hébert, Marcia Imbeau, Jann Leppien, Marian Matthews, Stuart Omdal, and Karen Westberg—present their findings in the site profiles in this monograph. In some situations, they found that the classroom teachers implemented curriculum modification procedures, employed flexible grouping practices, provided advanced level content, or provided opportunities for advanced level projects to accommodate students' differing academic needs. At some sites, the teachers collaborated with the other teachers at their grade level or with district curriculum specialists to provide more academic challenges to talented students. And in some situations, the teachers and parents described the leadership of school principals or superintendents whom they believed were responsible for teachers' instructional practices. A synthesis of the findings and themes across the 10 sites are included in the final chapter of the monograph.

# Profiles of Successful Practices for High Ability Students in Elementary Classrooms

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## EXECUTIVE SUMMARY

The Successful Practices Study was an in-depth investigation of schools and regular classrooms that have a reputation for effective implementation of curriculum differentiation practices to meet the needs of high ability students. The following researchers gathered data at 10 elementary schools: Linda Emerick, Thomas Hays, Thomas Hébert, Marcia Imbeau, Jann Leppien, Marian Matthews, Stuart Omdal, and Karen Westberg. The researchers' findings, as well as a synthesis of the findings and themes, are described briefly in this executive summary and are presented as separate chapters in the full research monograph.

## Review of Related Literature

Little significant research has investigated whether classroom teachers provide adequate challenge or different experiences to gifted students[1] or how teachers provide these experiences. To respond to this need, The National Research Center on the Gifted and Talented conducted two national studies, The Classroom Practices Survey Study (Archambault et al., 1993) and The Classroom Practices Observation Study (Westberg, Archambault, Dobyns, & Salvin, 1993). The results from these studies indicated that few accommodations are made to meet the individual needs of high ability students in regular classrooms.

Throughout the past thirty to forty years, advocates have called for a differentiated education for high ability students, and experts concur that instructional and curricular differentiation is necessary to accommodate students' differing learning needs. For example, Passow (1982) stated that "Gifted students need learning experiences appropriate to their individual abilities, interests, and learning styles. Individual uniqueness should be respected and provided for, and every effort should be made to adapt learning experiences to the wide variety of student needs" (p. 5).

Although educators realize that it is important to adapt instruction to accommodate differences demonstrated by students whose skills and capabilities are more advanced, most classroom teachers have had little, if any, professional preparation for adapting instruction to meet the needs of capable students and for managing the classrooms in which these students learn (Archambault et al., 1993; Westberg et al., 1993). For example, in the Classroom Practices Survey Study, 61% of the third and fourth grade public school teachers reported that they had no hours of inservice training or formal coursework that addressed any gifted education topics (Archambault et al., 1993).

Differentiated education occurs through procedures such as changing pace, going into more depth, focusing on higher-level thinking skills, and encouraging independent

[1]Note, the words "gifted," "gifted and talented," "high achieving," and "high ability" are used throughout the monograph to refer to students with outstanding talent.

learning. In a recent video and guidebook for teachers (Association for Supervision and Curriculum Development [ASCD], 1994), Tomlinson discusses several specific instructional and management strategies for providing differentiated experiences that are appropriate for gifted learners: curriculum compacting, independent projects, interest center or interest groups, tiered assignments, flexible skills grouping, high-level questions, mentorships/apprenticeships, learning centers, and contracts/management plans.

The literature informs us about what could and what should be done to accommodate students' individual needs; however, these practices are not employed on a widespread basis. Nevertheless, these practices are employed in some classrooms, and The Successful Practices Study was conducted to learn more about the specific ways in which teachers make accommodations for students and the factors that influence their practices.

## Procedures

To describe both the ways in which accommodations are made for high ability students and the factors that influence these practices, a multisite case study method was selected to conduct observations in classrooms and to interview teachers, administrators, and students. Marshall and Rossman (1995) recommend a multisite case study strategy when the "purpose is to investigate events, beliefs, attitudes, and policies that shape a phenomenon" (p. 41). The following research questions were formulated to guide the data collection: (1) What factors contribute to classroom teachers' effective use of differentiated teaching strategies? (2) What environmental factors within the classroom and school contribute to the effective use of differentiated teaching strategies? (3) How does the existence of a gifted education program, if one exists, affect the instructional strategies and materials used in the regular classroom and the students' need for instructional and curricular differentiation?

To address the above research questions, 10 sites were selected for the case studies (two urban, six rural, and two suburban). To select the sites, telephone calls were made to individuals familiar with a large number of school districts within a state or region including, for example, state directors of gifted education, state curriculum specialists, university instructors, supervisors of student teaching, and regional educational service directors. If a district was named by at least three sources, permission was obtained to conduct the study in one elementary school, including a third, fourth, or fifth grade classroom. The researchers who gathered data at the 10 sites are university faculty members from various regions of the country.

The major data-gathering techniques were "passive participant observation," which refers to the researchers' role as a "participant as observer" (Fraenkel & Wallen, 1993), and open-ended interviews with classroom teachers. Interviews also were conducted with other individuals, such as curriculum coordinators, gifted education specialists, parents, students, and community members. Documents, such as policy statements, administrative memos, faculty meeting minutes, curriculum guides, enrichment materials, and curriculum compacting records also were reviewed. The triangulation of data through observations, interviews, and documents from various sources provides reliability evidence for the findings (Lincoln & Guba, 1985). The researchers coded and analyzed observational, interview, and document data to uncover patterns that provide a description of the findings and themes from each site.

## Overview of Site Profiles

An overview of the sites in The Successful Practices Study, including a few selected findings, is presented in Figure 1. Because assurances of confidentiality were provided to districts, pseudonyms are used to refer to names of the 10 school sites.

Linda Emerick conducted a case study at East Meadow Elementary, a school located in an economically disadvantaged, urban city. This city is faced with the difficulties and problems that plague most cities in this country, including poverty and crime. Despite these challenges, however, the staff at East Meadow has created an exciting and a challenging learning environment for its students.

A different picture is provided by Tom Hays who studied three rural schools in the Midwest. His site profiles include a discussion about the relationship between the communities and the education provided in these small towns. Although the findings from all three sites are not identical, he found similarities among them, such as collaboration between the gifted education coordinators and the classroom teachers.

Jann Leppien conducted a case study at Forest Hills Elementary, a school located in a rural New England community that is considered an "emerging suburban area." Although the school is very small, the district employs several teaching specialists and classroom teachers. In fact, this is one of the major findings from the site; namely, the effects of the collaboration between the curriculum specialists and classroom teachers.

Approximately two thousand miles away in another small school, Marian Matthews conducted a case study at Homer Elementary School. Homer School is located in a very rural area in the Southwest with an enrollment of only 160 students. Despite its small size and limited resources, this school offers a gifted program, and its greatest advocate is the school superintendent.

Tom Hébert presents a site profile of Maple Grove School, which is located in a suburban school district that borders an urban area. He focuses on a teacher who, because of her training in special education, is aware of how students learn at different rates and knows how to adapt instruction to meet students' differing needs.

Stuart Omdal presents a site profile of Salisbury, a small, rural school in New England. This school uses the Schoolwide Enrichment Model (Renzulli & Reis, 1985) for providing enrichment teaching and learning, and many of the findings from this site are related to the enrichment program coordinator 's effective implementation of the model.

Marcia Imbeau presents the findings from two elementary schools in the Sutton School District, which is located in the south central region of the United States. Among the successful practices she describes are: collaboration between the gifted education teachers and classroom teachers and the teachers' strategies for adapting instruction for individual students.

Another profile of a suburban school district is presented in the profile of Woodland Elementary. Karen Westberg conducted the case study at this school by focusing on a fifth grade classroom teacher who provided curriculum compacting services to students in three fifth grade classrooms through a departmentalized teaching arrangement.

| School Site | Community Type/Region | Selected Findings |
|---|---|---|
| 1. East Meadow | Urban<br>North Central | Grade Level Team Teaching<br>Curricular Modifications<br>Wednesday Enrichment |
| 2. Eastville | Rural<br>Midwest | Advanced Level Content<br>Collaboration Between G/T Coordinator and Teachers<br>Community Support for Education |
| 3. Forest Hills | Rural<br>New England | Collaboration Between Teachers and Curriculum Coordinators<br>Flexible Grouping Practices<br>Administrative Advocacy of the G/T Program |
| 4. Homer | Rural<br>Southwest | Flexible Identification for Gifted Education Services<br>Superintendent's Involvement in the Educational Program<br>Schoolwide Theme-Based Projects |
| 5. Maple Grove | Urban-Suburban<br>New England | Classroom Teacher's Special Education Training<br>University Mentorship Program<br>*Talents Unlimited* Program |
| 6. Northtown | Rural<br>Midwest | Students' Advanced Level Products<br>Higher Order Questioning Strategies<br>Curriculum Compacting |
| 7. Salisbury | Rural<br>New England | Flexible Grouping Practices<br>Curricular Modifications<br>Schoolwide Enrichment Model |
| 8. Springdale | Rural<br>Midwest | Curriculum Compacting in Students' Strength Areas<br>Curriculum "Extensions," i.e., Breadth & Depth<br>Collaboration Between G/T Teacher & Classroom Teachers |
| 9. Sutton | Suburban<br>South Central | Collaboration Between G/T Teacher & Classroom Teachers<br>Teacher's Concern About Meeting Individual Differences<br>Active Learning Experiences for Students |
| 10. Woodland | Suburban<br>New England | Curriculum Compacting in Mathematics & Spelling<br>Departmentalized Teaching<br>Integrated Language Arts Curriculum |

Figure 1. Overview of the sites in the Successful Practices Study.

As indicated by the above information, the findings from the individual sites are varied. The researchers' chapters contain more detailed descriptions of the settings, informants, findings, and themes for each site.

## Themes

The following themes emerged across the sites in the study: teachers' advanced training and knowledge; teachers' willingness and readiness to embrace change; teachers' beliefs and strategies for differentiating curriculum for individual students; collaboration (within grade levels, between gifted education specialists and classroom teachers, between curriculum specialists and classroom teachers); administrative leadership; and autonomy and support. A brief discussion of each theme follows.

First, several researchers discussed the advanced training and knowledge of the classroom teachers who were the focus of the investigations. The majority of the teachers had graduate degrees, often in areas of special education or reading, fields in which teachers focus on students as individuals. Although every teacher did not have a graduate degree, all teachers had been involved in a variety of professional development experiences over the years. Inservice training was used by districts quite frequently to provide opportunities for teachers to learn new strategies, but teachers reported that they learned new techniques through a variety of professional development experiences. For example, some teachers indicated that they learned about specific instructional strategies from mentors and co-workers. Although most of the teachers had been teaching for several years, they continued to be interested in improving their practices.

The second theme that emerged across sites is the teachers' willingness to make changes in their practices. Several teachers indicated that when experimenting with new strategies, they realized that they will not be successful every time. Because the teachers were *willing* to spend extra time and effort to make changes in their practices, they had the *requisite readiness* to make it happen. Fullan (1993) says, "If there is one cardinal rule of change in human condition, it is that you cannot *make* people change" (p. 23). The profiles indicate that several teachers spent many extra hours each week planning voluntarily with their colleagues and preparing instructional lessons and materials. The teachers' psychological and intellectual readiness for making changes appears to have influenced their practices.

The third theme that emerged is the different forms of collaboration that were reported in the site profiles. One form of collaboration was observed at sites where the teachers attributed their successful practices to collaboration with grade-level colleagues. Another form of collaboration was reported at sites where classroom teachers collaborated a great deal with the gifted education specialist in their buildings. And finally, a third form of collaboration was observed at one of the sites where the classroom teachers collaborated with the curriculum specialist to plan differentiated instruction for high ability students. The literature indicates that collaboration among teachers probably has the greatest influence on teachers' willingness to change their practices (Bennett, 1986; Dantonio, 1995; Hord, Rutherford, Huling-Austin, & Hall, 1987).

The fourth theme that emerged is teachers' beliefs and strategies for differentiating curriculum for individual students. The researchers described a variety of strategies that the teachers used to differentiate curriculum and instruction for high ability students in the study. Although differentiation is defined in many different ways, it generally refers to the various approaches that teachers use for accommodating students' academic differences by

determining what students will learn, how students will learn, and how students will demonstrate what they have learned (Tomlinson, 1995). Because the majority of the teachers had an awareness of the academic diversity among students, they tailored their instruction to meet students' individual needs by establishing high standards, making curriculum modifications, finding mentors, encouraging independent investigations and projects, or creating flexible instructional groups.

The teachers in the study provided challenges and choices to students. Some teachers discussed their high expectations for advanced learners and their attempts to provide challenging material. Many teachers provided opportunities for students to pursue individual projects on topics of their choice. By providing challenges and choices to students, the teachers stimulated students' interests and recognized the influence of interests on students' intrinsic motivation and learning. A couple of the sites made particular efforts to accommodate students' interests by using the Schoolwide Enrichment Model (Renzulli & Reis, 1985) to develop students' talent.

Leadership was the fifth theme that emerged from the study. The researchers discussed the role of significant leaders in some of the site profiles. The influence of school superintendents who spoke publicly about the importance of providing programming for high ability students and were strong advocates of their schoolwide enrichment programs was described at two rural schools. The influence of a school principal was particularly significant in the profile at East Meadow, where the principal was viewed by the teachers as a highly effective leader in the school who influenced their classroom practices.

Autonomy and support was the final theme that emerged from the profiles. Teachers discussed the autonomy and support they felt for implementing new practices, such as experimenting with flexible staffing patterns. Other teachers described the support they had for implementing new curriculum. For example, the teachers at East Meadow spoke about the principal's support for experimenting with new ideas. Many researchers discussed the supportive atmosphere or collaborative culture of the schools.

The above six themes emerged across the 10 sites in the study. The implementation of successful classrooms practices begins with teachers' advanced knowledge and training, which impacts teachers' willingness and readiness to embrace change. When teachers collaborate with others in their efforts to affect change, they implement various strategies for differentiating the curriculum. Furthermore, teachers are successful if they have strong administrative leaders who provide them with autonomy and support, which results in a belief system and school culture that supports the development of students' talent.

The study provided an opportunity to learn more about the practices that teachers use to accommodate the needs of talented students in regular classrooms. *Typical* teachers tailor instruction to students' *similarities*; but truly *effective* teachers tailor instruction to students' *differences* as well as their similarities. The profiles reported in this research monograph shed some light on how effective teachers and schools accomplish this challenging task.

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# Profiles of Successful Practices for High Ability Students in Elementary Classrooms

Karen L. Westberg and Francis X. Archambault, Jr., Editors

The University of Connecticut
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## CHAPTER 1: Introduction

Can you name an elementary school that has a reputation for meeting the individual needs of students, and specifically, the needs of high ability students? If you can name one, to what degree are you able to describe successful classroom practices or explain why they are occurring at that particular site? These were among the questions that guided The Successful Practices Study, and this monograph presents the findings from the in-depth investigations conducted for the study by the on-site researchers: Linda Emerick, Thomas Hays, Thomas Hébert, Marcia Imbeau, Jann Leppien, Marian Matthews, Stuart Omdal, and Karen Westberg. In this chapter, we will explain why and how this study was undertaken and provide an overview of the sites. The eight researchers who gathered data at 10 sites for the study present their site profiles in Chapters 2 through 11. In the final chapter, we discuss the findings and provide a synthesis across the 10 site profiles.

The Successful Practices Study was undertaken to extend the information gained from the three studies conducted earlier by the University of Connecticut site of The National Research Center on the Gifted and Talented (NRC/GT); namely, The Classroom Practices Survey Study (Archambault et al., 1993), The Classroom Practices Observational Study (Westberg, Archambault, Dobyns, & Salvin, 1993), and The Curriculum Compacting Study (Reis et al., 1993). After conducting these studies, we believed it would be beneficial to conduct an in-depth investigation of schools and regular classrooms that had a reputation for effective implementation of curriculum differentiation practices to meet the individual needs of students. A summary of the findings from these three studies will be provided in this chapter.

Throughout the literature review and the remaining chapters, the words "gifted," "gifted and talented," "high achieving," and "high ability" are all used to refer to students with outstanding talent. The federal report, *National Excellence: A Case for Developing America's Talent* (U.S. Department of Education, 1993), offers the following definition that was based on the Javits Gifted and Talented Education Act: "Children and youth with outstanding talent perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience or environment" (p. 26). Thus, this definition should be kept in mind when reading the various terms that are used to refer to the "gifted and talented" throughout this monograph.

## Review of Related Literature

This review will examine the results from previous NRC/GT studies of instructional and curricular practices for high ability students in the regular classroom, the literature on adapting instruction for high ability students in regular classrooms, and the literature on effective schools and practices.

## NRC/GT Studies on the Regular Classroom

Little significant research has been conducted to investigate whether classroom teachers provide adequate challenge or different experiences to gifted students or how teachers provide these experiences. In response to this need, The National Research Center on the Gifted and Talented conducted three studies during 1990-1991. The Classroom Practices Survey (Archambault et al., 1993) solicited information from a stratified random sample of over 7000 third and fourth grade teachers throughout the United States about their background, the policies and procedures that their schools and districts had adopted for educating gifted students and, most importantly, the practices they used with gifted and average students in their classrooms. The teachers responded to 39 items on the practices portion of the survey, first for average and then for gifted students, using a scale which included the following responses: never, once a month or less, a few times a month, a few times a week, daily, and more than once a day. To increase the interpretability of the results, the 39 items were reduced to 6 factors or scales: (1) Questioning and Thinking; (2) Providing Challenges and Choices; (3) Reading and Written Assignments; (4) Curricular Modifications; (5) Enrichment Centers; and (6) Seatwork. Teachers reported their practices with both types of students, which provided a measure of the extent to which gifted students were receiving an enriched or a differentiated education.

The most salient finding on the survey was that classroom teachers reported making only minor modifications in the regular curriculum to meet the needs of gifted students. This result was found for public and private schools as well as for classrooms in various parts of the country and in various types of communities (urban, suburban, and rural). A few teachers who did make modifications indicated that they provided for the capable students in their classrooms by assigning advanced readings, enrichment worksheets, and reports of various kinds. An extremely small number of teachers attempted to eliminate materials that students had already mastered, provide opportunities for students to do more advanced work, or expose students to higher level thinking skill materials. When compared to average students, gifted students were not given more opportunity to pursue self-selected interests, work in groups with students having common interests, or use enrichment centers. Again, it should be noted that teachers *themselves* reported these practices on a confidential survey.

For The Classroom Practices Observation Study (Westberg, Archambault, Dobyns, & Salvin, 1993), semistructured observations were conducted in 46 third or fourth grade classrooms that represented school districts within the four regions of the country, as designated by the U.S. Census Bureau, and districts in rural, suburban, and urban communities. An observation instrument entitled The *Classroom Practices Record (CPR)* was designed to document the extent to which gifted and talented students receive modifications in curricular activities, materials, and teacher-student verbal interactions in the classroom. The *CPR* instrument was used to record the types of instructional activities, the size of the groups, the composition of the groups, verbal interactions, and the length and types of differentiation experienced by the target gifted and talented student during reading, language arts, mathematics, social studies, and science classes. Trained observers used the instrument to record information on two target students, one gifted and talented student and one average ability student, to compare the curriculum and instruction provided to these students within the same classroom.

The results from the observations indicated that the target gifted and talented students received a limited amount of differentiation in reading, language arts, mathematics, science, and social studies instruction. For the purposes of this study, six codes were used to record evidence of differentiation: advanced content instruction, advanced process instruction, advanced product or project instruction, independent study with assigned

topics, independent study with self-selected topics, and other differentiation experiences. Across all five subject areas, the target gifted and talented or high ability students received no differentiated experiences in 84% of the activities in which they were involved.

In addition to investigating the differentiation in the observed classrooms, analyses were conducted on the types of questions posed to target students and the wait times associated with these questions. No significant differences in question types (namely, knowledge/comprehension versus higher order thinking skills) were found between the target gifted and talented and target average students. Wait time, the length of elapsed silent time after a question, was also recorded. A statistically significant, but weak association was found between the type of target student and the questions that were accompanied by at least three seconds of pre-response wait time. Specifically, more wait time was provided to average ability students than to gifted students. The conclusion from The Classroom Practices Survey Study and The Classroom Practices Observation Study was that little instructional and curricular differentiation for high ability students was occurring within the majority of the regular classrooms throughout the country.

The Curriculum Compacting Study (Reis et al., 1993) was an experimental study that investigated the effects of a curriculum modification technique entitled curriculum compacting. Curriculum compacting is a procedure for streamlining the regular curriculum and replacing it with material that is at an appropriate challenge level for high ability students. Teachers from 27 school districts throughout the country were assigned to one of four groups, three treatment groups that received different levels of staff development or a control group. After receiving staff development training, the teachers in each of the treatment groups implemented curriculum compacting for one or two high ability students in their classrooms. Several instruments were administered to students on a pre and post basis, including the *Iowa Tests of Basic Skills*. The results indicated that teachers who modified the curriculum for high achieving students could eliminate 40 to 50% of the regular curriculum without any significant decrease in standardized achievement test scores and could provide students with more enriching and appropriate curricular experiences.

## Adapting Instruction for Individual Students

Educators recognize that students learn in different ways but do not always deal successfully with these differences in the classroom. Wang and Walberg (1985) said:

> Every class contains students with different interests, problems, and talents; and most educators realize that whole-group instruction lessons geared to the "average" student are bound to be too difficult for some learners in the class and too easy for others. (p. 325)

Despite this recognition, several studies indicate that a "one size fits all" instructional method is the predominant practice in the majority of classrooms throughout the country (Archambault et al., 1993; Goodlad, 1984; Westberg et al., 1993). In a recent, four-year study (Morocco, Riley, Gordon, & Howard, 1996) that examined elementary teachers' planning for individual students with unique needs, the researchers concluded:

> Teachers generally focused their planning on the class as a whole. When they did think about individuals, their focus was mainly on the students' social and emotional needs, or on global and unconditional traits. The implication was that such traits and social/emotional issues were beyond the boundaries of the teachers' influence. (p. 164)

Emmer, Evertson, and Anderson (1980) investigated the instructional strategies that distinguish effective elementary teachers from ineffective elementary teachers as measured by students' achievement. They found that the effective teachers adapted their instruction to students' interests, skill levels, and attention span. When Evertson, Sanford, and Emmer (1981) focused on the ways that junior high teachers adapt their instruction in heterogeneous classrooms, they found that a few teachers did use appropriate techniques for managing the classroom and for providing differentiated instruction, but that such modification required a high degree of teachers' energy, commitment, and determination.

Adapting instruction to accommodate differences demonstrated by students whose skills and capabilities are more advanced is particularly challenging. Unfortunately, most classroom teachers have had little, if any, professional preparation for adapting instruction to meet the needs of capable students and for managing the classrooms in which these students learn (Archambault et al., 1993; Westberg et al., 1993). For example, in the Classroom Practices Survey Study, 61% of the third and fourth grade public school teachers reported that they had no hours of inservice training or formal coursework that addressed any gifted education topics (Archambault et al., 1993).

Throughout the past thirty to forty years, advocates have called for a differentiated education for high ability students. The earliest definition of differential education for the gifted was offered by Virgil Ward who stated that gifted students comprise ". . . a potential for recognizably different experiences—some say categorically different" (1961, p. 79). Among the many propositions that Ward suggested for gifted students is: Proposition VIA: "That in the education of the gifted child and youth, the scope of the content should extend into the general nature of all the chief branches of knowledge" (p. 144). Ward argued for a differentiated curriculum in the areas of humanities, mathematics, social sciences, natural sciences, dance, drama, music, and painting. The Marland Report, a national study on the gifted commissioned by the U.S. Congress in 1971, stated that gifted and talented children "require differentiated educational programs and/or services beyond those normally provided by the regular school program" if they are "to realize their contribution to self and society" (p. ix). Thus, a rationale for providing differentiated education is based on the recognition of students' differing learning characteristics and behaviors. Passow (1982) stated, "The philosophy which underlies differentiated education is one which asserts that gifted/talented individuals, like all others, possess unique needs which can only be addressed through appropriately designed curricula" (p. 5). Like all students, gifted students need learning experiences appropriate to their "individual abilities, interests, and learning styles. Individual uniqueness should be respected and provided for, and every effort should be made to adapt learning experiences to the wide variety of student needs" (p. 5). Gifted children learn at a different rate from other groups of children and accommodating that rate is crucial to their development (Keating, 1976). "Furthermore, differences in rate or pace can be so great that these necessitate differences in kind, not merely degree, of instruction" (Ward, 1961, p. 177).

Experts concur that differentiation of instruction and the curriculum is necessary to accommodate the different learning needs and maximize the education of gifted students. The recent federal report entitled *National Excellence: A Case for Developing America's Talent* (U.S. Department of Education, 1993) concluded that: "Schools also must assess students' levels of competence in the regular school curriculum in each of the core subjects and provide alternative learning opportunities for students who have mastered them" (p. 27). Differentiated education occurs through procedures such as changing pace, going into more depth, focusing on higher-level thinking skills, and encouraging independence. VanTassel-Baska (1989) identified four aspects of curriculum modification that should be addressed in the curriculum: deleting or compressing basic curriculum that has already been mastered or that can be mastered quickly; concentrating on higher level thinking skills

to provide tools for the production rather than the consumption of knowledge; providing depth to the curriculum by concentrating on the interrelationships among bodies of knowledge; and encouraging self-directed learning so that the students can utilize more program options of an independent nature. In a recent video and guidebook for teachers (Association for Supervision and Curriculum Development [ASCD], 1994), Tomlinson presents several specific instructional and management strategies for providing differentiated experiences that are appropriate for gifted learners: curriculum compacting, independent projects, interest center or interest groups, tiered assignments, flexible skills grouping, high-level questions, mentorships/apprenticeships, learning centers, and contracts/management plans.

### Effective Schools and Practices

Several different variables and a variety of criteria have been used to examine or to recognize effective schools in this country. For example, the 1985-1986 school year was designated the Year of the Elementary School by the Secretary of Education William Bennett and schools throughout the country were encouraged to apply for recognition (Hostrop, 1989). A total of 212 public and 60 private elementary schools were given awards based on how well the schools used resources, how they met students' academic needs, or how they overcame obstacles. None of the schools that received awards, however, were recognized specifically for their efforts to address students' individual needs. In fact, no mention is made in the literature about an award program that has addressed schools' effectiveness or success in addressing students' individual needs and, in particular, the needs of high ability students. Instead, schools are recognized usually as "effective" or "successful" for improving their governance practices. For example, The National Center for Effective Schools has focused on decision-making processes within schools as a means for improving or reforming schools, and profiles of schools involved in these efforts do not include information about instructional or curricular adaptations for meeting students' individual needs (Taylor, 1990).

The literature informs us about what could and what should be done to accommodate students' individual needs; however, these practices are not employed on a widespread basis. Nevertheless, these practices are employed in some classrooms, and The Successful Practices Study was conducted to learn more about the specific ways in which teachers make accommodations for students and the factors that influence them.

## Research Design

The premise upon which this study was designed was that immersion in the setting of the classrooms using curricular differentiation practices would provide rich data for answers to questions about the complexities and processes that comprise successful practices for high ability students in schools. Therefore, we selected a qualitative research design for the study and, because we were interested in *describing* these practices, a multisite case study method was selected to conduct observations in classrooms and interviews with teachers, administrators, students, and others. Marshall and Rossman (1995) recommend a multisite case study strategy when the "purpose is to investigate events, beliefs, attitudes, and policies that shape a phenomenon" (p. 41). The research questions that were formulated to guide the study were: (1) What factors contribute to classroom teachers' effective use of differentiated teaching strategies? (2) What environmental factors within the classroom and school contribute to the effective use of differentiated teaching strategies? (3) How does the existence of a gifted education

program, if one exists, affect the instructional strategies and materials used in the regular classroom and the students' need for instructional and curricular differentiation?

# Procedures

## Sampling

Purposive sampling was used to select 10 elementary school sites for the study, and case studies were conducted at each site (two urban, six rural, and two suburban.) To select the sites, telephone calls were made, first of all, to individuals familiar with a large number of school districts within a state or region including, for example, state directors of gifted education, state curriculum specialists, university instructors, supervisors of student teaching, and regional educational service directors. These individuals were asked to name school districts in their state or area that had a reputation for meeting students' individual needs, particularly the needs of capable students. Then, a list was compiled of the districts named, and districts which had received national or state awards for excellence were added to the list. Finally, when a district had been named by at least three sources, discussions were held with personnel in the school districts to obtain permission for conducting the study in one elementary school and, specifically, in one elementary third, fourth, or fifth grade classroom. We sought permission to "go wherever the data led"; therefore, several meetings were conducted to obtain the appropriate informed consent from school personnel and students.

## Data Collection and Analysis

The researchers who gathered data for the study are university faculty members in various regions of the country. They have training and experience in general education, gifted education, and research methodology. A faculty member at the University of Connecticut, Dr. Charles Bruckerhoff, an experienced qualitative researcher and qualitative methodology expert, provided the researchers with additional training for the study.

The general methodological procedures are described here, but the researchers include a methodological note at the end of their site profiles in which they describe their particular data gathering processes. The major data-gathering techniques were "passive participant observation," which refers to the researchers' role as a "participant as observer" (Fraenkel & Wallen, 1993), and open-ended interviews with classroom teachers. Interviews were conducted also with other individuals, such as curriculum coordinators, the gifted education specialists, parents, students, and community members. Through the interviews, the views of the participants provided what Malinowski (1983) calls "[their] vision of [their] world." "Grand tour questions" (Spradley, 1979, p. 86), such as, "Can you explain the modifications you use for individual students?" or "Can you explain to me how your teacher assesses what you already know?" elicited responses that enabled the researchers to obtain an in-depth understanding of participants' views.

The researchers spent several months observing in classrooms during the winter and spring of 1992. The observations and interviews were conducted until data saturation occurred; namely, when the information became redundant and did not offer useful reinforcement of information previously collected (Bogdan & Biklen, 1982). The researchers kept detailed field notes and field logs to keep inferences to a low level (Pelto & Pelto, 1978). In addition to observations and interviews, documents, such as policy statements, administrative memos, faculty meeting minutes, curriculum guides, enrichment materials, and curriculum compacting records were reviewed. By interviewing

administrators, teachers, and students and reviewing documents, a clearer picture of the situation at each site emerged, and the triangulation of data through observations, interviews and documents from various sources provides reliability evidence for the findings (Lincoln & Guba, 1985).

The researchers coded and analyzed field note, interview, and document data for themes, patterns, and topics. The coding process involved inductive analysis to uncover patterns that provide a description of the findings and themes from each site. Although the researchers explain their specific data analysis methods in their respective chapters, they all followed a systematic set of procedures to address the research questions that guided the study (Strauss & Corbin, 1990). The findings and themes that emerged from each case study are presented in the site profiles in the following chapters.

## Overview of Site Profiles

An overview of the sites in The Successful Practices Study is presented in Figure 1. Assurances of confidentiality were provided to school districts, schools, and individuals at the various sites; therefore, pseudonyms are used to name them. As noted earlier, the schools are located in two urban, two suburban, and six rural communities within the several regions of the country. The figure also includes a few selected findings from each site.

Linda Emerick conducted a case study at East Meadow Elementary, a school located in an economically disadvantaged, urban city. This city is faced with the difficulties and problems that plague most cities in this country, including poverty and crime. Despite these challenges, however, the staff at East Meadow has created an exciting and a challenging learning environment for its students. The strategies used by the teachers, the leadership provided by the principal, and the efforts of the parents have resulted in unique opportunities for students such as "Enrichment Wednesdays." The findings from this site are presented in Chapter 2.

A different picture is provided by Tom Hays who studied three rural schools in the Midwest, and his profiles are presented Chapters 3, 7, and 9. His site profiles include a discussion about the relationship between the communities and the education provided in these small towns. Although the findings from all three sites are not identical, he found similarities among them, such as collaboration between the gifted education coordinators and the classroom teachers.

Jann Leppien conducted a case study at Forest Hills Elementary, a school located in a rural New England community that is considered an "emerging suburban area." Although the school is small (320 students), the district employs several teaching specialists and classroom teachers. In fact, this is one of the major findings from the site; namely, the effects of the collaboration between the curriculum specialists and classroom teachers. The findings from this site are presented in Chapter 4.

Approximately two thousand miles away, Marian Matthews conducted a case study at another small school, Homer Elementary School. Homer School is located in a very rural area in the southwest with an enrollment of only 160 students. Despite its small size and limited resources, this school offers a gifted program, and its greatest advocate is the Superintendent of Schools. Some of the innovations at this school, such as schoolwide enrichment opportunities, are described in Chapter 5.

| School Site | Community Type/Region | Selected Findings |
|---|---|---|
| 1. East Meadow | Urban<br>North Central | Grade Level Team Teaching<br>Curricular Modifications<br>Wednesday Enrichment |
| 2. Eastville | Rural<br>Midwest | Advanced Level Content<br>Collaboration Between G/T Coordinator and Teachers<br>Community Support for Education |
| 3. Forest Hills | Rural<br>New England | Collaboration Between Teachers and Curriculum Coordinators<br>Flexible Grouping Practices<br>Administrative Advocacy of the G/T Program |
| 4. Homer | Rural<br>Southwest | Flexible Identification for Gifted Education Services<br>Superintendent's Involvement in the Educational Program<br>Schoolwide Theme-Based Projects |
| 5. Maple Grove | Urban-Suburban<br>New England | Classroom Teacher's Special Education Training<br>University Mentorship Program<br>*Talents Unlimited* Program |
| 6. Northtown | Rural<br>Midwest | Students' Advanced Level Products<br>Higher Order Questioning Strategies<br>Curriculum Compacting |
| 7. Salisbury | Rural<br>New England | Flexible Grouping Practices<br>Curricular Modifications<br>Schoolwide Enrichment Model |
| 8. Springdale | Rural<br>Midwest | Curriculum Compacting in Students' Strength Areas<br>Curriculum "Extensions," i.e., Breadth & Depth<br>Collaboration Between G/T Teacher & Classroom Teachers |
| 9. Sutton | Suburban<br>South Central | Collaboration Between G/T Teacher & Classroom Teachers<br>Teacher's Concern About Meeting Individual Differences<br>Active Learning Experiences for Students |
| 10. Woodland | Suburban<br>New England | Curriculum Compacting in Mathematics & Spelling<br>Departmentalized Teaching<br>Integrated Language Arts Curriculum |

Figure 1. Overview of the sites in the Successful Practices Study.

In Chapter 6, Tom Hébert presents a site profile of Maple Grove School, which borders a large urban area. Although technically located in a suburban school district, the school is located in a neighborhood faced with challenges that are associated with urban areas. In his site profile, he focuses on a teacher whom he calls "a visionary." Because of her training in special education, she is aware of how students learn at different rates, and she knows how to adapt instruction to meet students' differing needs.

Stuart Omdal presents a site profile of Salisbury, a small, rural school in New England. This school uses the Schoolwide Enrichment Model (Renzulli & Reis, 1985) for providing enrichment teaching and learning, and many of the findings from this site are related to the enrichment program coordinator 's effective implementation of the model. A description of several successful practices from this site are presented in Chapter 8.

In Chapter 10, Marcia Imbeau presents a site profile of a suburban school district in the south central region of the United States. She presents the findings from two elementary schools in the Sutton School District, Rogers Elementary and Franklin Elementary. Among the successful practices she describes are: collaboration between the gifted education teachers and classroom teachers and the teachers' strategies for adapting instruction for individual students.

Another profile of a suburban school district is presented in Chapter 11 at Woodland Elementary. Karen Westberg conducted the case study at this school by focusing on a fifth grade classroom teacher who provided curriculum compacting services to students in three fifth grade classrooms through a departmentalized teaching arrangement.

As the above overview of the 10 sites indicates, there is a much variety in the findings. More detailed descriptions of the settings, informants, findings, and themes for each site are presented in the following chapters. A synthesis across sites is included in the final chapter of the monograph.

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# CHAPTER 2: Successful Practices at East Meadow Elementary School—Discovering Talent in an Inner City School

Linda J. Emerick, Ph.D.

## Introduction

Recessionary times have been hard on education in general and on education of the gifted in particular. This situation is especially evident in many urban schools. Cuts in funding, increasingly limited resources, and overcrowded conditions have resulted in a "bare minimum" approach to education in many inner-city schools. Unfortunately, teachers and administrators have little energy, resources, or time to deal with the needs of advanced learners after trying to help most students simply survive another day in the classroom. Many of these schools also find themselves surrounded by neighborhoods that are plagued by high unemployment, rising crime, and the deterioration of family and community. Thus, struggles within the classrooms are often a reflection in miniature of what is taking place on the streets. The most many teachers can hope for is that the best and brightest of their students can in some way pull themselves out of an otherwise toxic environment.

This chapter is about a school and, in particular, a classroom located in an urban setting that most residents are trying to escape. In many ways, this school is very much like others in large cities; it is experiencing the same problems of violence, drugs, and truancy. I was surprised, then, to hear East Meadow Elementary School described by others as a potential site for the successful practices study. Several educators in nearby affluent school districts suggested the fifth grade classes at East Meadow as a place where "gifted education on a shoestring" was taking place. Teachers were working together to identify the potential of students and to do something positive to develop that potential. This profile is about East Meadow and the students and teacher of one fifth grade classroom who are not aware that hard times means limiting educational options.

## Setting

### The Community

East Meadow Elementary School is situated on the perimeter of a large midwestern city. To approach the school, the visitor must travel past block after block of what now are the major entrepreneurial enterprises of the area—sex shops, bars, tattoo parlors, and gun shops. Originally a blue-collar factory area, East Meadow has been in a state of decay since the mid-eighties. At that time, many of the major manufacturing companies that dotted the region moved south for warmer climates and lower operating costs. The remaining businesses could not employ residents on the scale of the original plants; as a result, unemployment has risen, and the number of people living below the poverty line has increased.

The residential sections of East Meadow still bear some resemblance to the middle class community it was in earlier times. The streets are lined with two-bedroom bungalows and two-story duplexes that were built in the 1950s and 1960s when this area was largely

populated by Polish-American factory workers. Now the houses are occupied predominantly by African Americans, Hispanics, Southeast Asians, and Native Americans. The yards are small, and many are surrounded by chain-link fences. Several windows and doors are covered with protective bars to prevent burglaries. There is little money available to perform repairs, and many of the houses are beginning to show wear—sagging roofs, peeling paint, crumbling masonry.

## The School

Originally built in 1938, East Meadow is now a sprawling, red brick complex of disparate parts. Little remains from the 1930s as over the years new wings and additions have replaced the original structure. It is only when the visitor enters the school that there is any real sense of the people who are there.

The brochure that advertises East Meadow Elementary School is on plain blue paper, fresh off the office copy machine in the office. Across the top, is the hand-painted heading, "East Meadow: For a Year of Excellence, It Takes All Three." The "all three" are student, staff, and parents who make up the "East Meadow family." Over 700 children attend East Meadow in grades kindergarten through 6. The number increases each year as many non-English speaking immigrants move to the area for cheaper housing. Forty-six percent of the children are from minority populations, with Southeast Asians and African Americans predominating. Hispanic-Americans and Native Americans are also present in the classrooms. Approximately 80% of the children qualify for free or reduced lunch plans. There are usually four teachers per grade level although the number varies from year to year depending on enrollment. In addition, there are numerous support staff members, such as the South East Asian social worker, the African American music teacher, and the Anglo science enrichment teacher.

This feeling of "family" is communicated to the visitor. East Meadow is a busy place, and the long halls are covered with the work of students. Examples are stories written and pictures created on computer, a huge display of family photographs celebrating the ethnic traditions of the community, and a "Hall of Presidents" display where James Madison looks very much like Count Dracula because of a widow's peak that has been added to his wig. There are also posters of words in Swahili, the "foreign language of the week," examples of "outstanding assignments," announcements for the PTO meeting for non-English speaking parents, and general "stuff" that students and teachers felt were worth displaying. The overall impression is one of individuality and pride in recognizing student accomplishments. There is a great deal of activity in the halls as students work on various projects and move to special classes, but the noise level is surprisingly low. Children and teachers alike converse in low tones in a relaxed, easy manner.

## The Classroom

Janet Mason's fifth grade class is located in a large, windowless room at the rear of the school building. The walls are decorated with a light gray burlap material, and dark orange carpeting covers the floor. The recessed, florescent ceiling lights give the room an airy, light atmosphere. Twenty-seven student desks with yellow and orange chairs are arranged in groups of two, four, or six in various areas of the room. All desks face the blackboard that stretches across the front of the room. An assortment of tables, scattered around the room, serves as work centers. A computer system is at one table, while another holds students' health posters that have not been completed. A third table displays materials about government and elections.

The 12 foot walls reflect the type of learning that goes on in Janet Mason's room. Because of the room's unusual shape, there are eight large surfaces on which student activities are displayed. One huge area, entitled "The Writer's Block," is covered with two to four page articles created by students. The current topics are "My Family" and "Friendship Cards." There are also examples of original writing that do not fall under a particular category. Some of the papers are handwritten, and several have been completed on a word processor. Another wall contains the "Problem-Solving Center." Various brain teasers are posted for students to work on as they wish. Student art work covers the space above the blackboard. Dozens of snowflakes have been cut out with no two alike in design or color. There is an "estimation" center to practice math skills, and there is a research area to identify "mystery photos" of the Civil War Era. Two bulletin boards are in the room, but they appear almost incidental compared to the material on the walls. One bulletin board has a typical calendar of the month with construction paper hearts for each day, and the other holds a map of the United States in the 1860s.

Books are everywhere. Shelves are filled with out-of-date reference materials, children's literature, the Junior Great Books Series, and books from the local public library on topics to be addressed in the days to come (i.e., the Civil War, airplanes, various science topics). There are stacks of past issues of *National Geographic* and four sets of encyclopedia in the bookcase below the "Problem-Solving Center." The haphazard arrangement of the materials seems to indicate that these materials receive frequent use.

## Elements of Successful School Practices for Gifted Students

Analysis of the data verified that curricular and instructional modifications were being made on a consistent basis for above-average students in Janet Mason's fifth grade class. Further analysis revealed elements that supported these practices, elements that were commented upon time and again by the informants.

### The Teacher

Janet Mason has been a teacher at East Meadow Elementary School for 22 years. She is a soft-spoken woman in her forties with short blond hair and is well liked by her fifth grade students. This was made clear to me on my first day of observation. Many of the students in the class watched as I took notes throughout the day, but no one said anything. Janet had explained that a person would be visiting the class. We both thought that was sufficient. Before the day was over, however, Angela, the tallest student in the class, approached me with two of her friends. "What are you doing here?", Angela demanded. She did not wait for me to answer. "Mrs. Mason is the best teacher that ever was, and we like her. You better not fire her or try to take her job." Angela's two friends were nodding vigorously with serious expressions on their faces. I could not help being amazed at this show of support by students on Janet's behalf. They had rallied against what was perceived as a threat to their classroom. Janet and I were able to convince Angela and the class that my role was benign. The episode was a clear example of Janet's effectiveness in the classroom.

Several years ago, Janet was selected by the principal to receive training as a "cluster" teacher for the sixth grade classes. It was her responsibility to design differentiated curriculum for children identified as gifted and talented at that grade level. She was intrigued by the children who were assigned to her class. In addition, she

believed that there were many more gifted children in the school other than those identified by test scores and checklists supplied by the school district. Janet explained:

> The cluster class became a status symbol for some. I have two (students) who should be in a program right now based on high scores, but they aren't. I've felt many of the children who were highly creative were skipped over, too.

Janet saw working with gifted children in the regular classroom as a "personal challenge" and enrolled in a graduate program in gifted education shortly after becoming a cluster teacher.

> This decision came out of my own personal frustration. This school has always done enrichment activities and some type of grouping for students, so it was my own frustration in the classroom. Plus, I enjoy being challenged and the unpredictable aspect of the job.

Last year, Janet's position in sixth grade was cut due to a decline in enrollment. She is now a regular classroom teacher in the fifth grade, informally sharing responsibilities with another "cluster" teacher who is developing curriculum and activities for gifted children.

> There is a lot of shared planning that goes on in the fifth grade. We try to do something every month like the Presidents' project that will appeal to all the students but especially to the gifted ones. I try hard not to exclude anyone from participating. We let the students pick their own groups to work on these projects and encourage them to mix their talents. It seems to work really well. The fifth grade team here has an unspoken rule. We each pick different areas of specialty like special education, gifted arts, counseling, and then we are committed to staying in the classroom to use the specialties. We each pick our area of personal challenge, interests.

Janet still uses the things she learned as a cluster teacher in the classroom—accelerated math opportunities, enrichment in the form of problem-solving activities, and writing. She said, "These are things all the kids in the class do, to some degree, but the gifted and talented are taken further." She feels one area where she is not providing a challenge is social studies. "That's not my strong area; in fact, it's a millstone around my neck. My own natural enthusiasm for the subject was killed by a poor teacher that I had." This is an area she has identified for future attention in the classroom because, "Right now, it's very hit or miss." "There is a very competent science "prep" teacher in the school whom Janet believes has provided challenges in science for the more talented children. The difficulty this year has been the school district's new emphasis on "whole group instruction." Janet believes that many options (i.e., humanities classes, photography club, inventors fair, dance lessons), once available for gifted children (and what she calls the "unofficial gifted"), have been cut because of this new emphasis and fewer available teachers. Now many of the teachers, Janet included, are doing these types of activities after school, or whenever they can work them into the schedule.

### Classroom Atmosphere and Activities

The day starts in Janet's class as students quietly enter the room and begin various tasks at their seats. On this morning, two young boys take their places at the computer, working together on deciphering a word processing program. A number of students sit at their desks, writing in journals or completing academic assignments. One girl works alone

at the back of the room, putting the finishing touches on her portion of the "Hall of Presidents" display.

Janet checks over her written plans for the day, then moves about the room as students ask her to see their accomplishments. There is a small group of girls and boys at the problem solving center, excitedly offering each other advice on how best to solve the brain teaser on display. There are still 15 minutes until the school day actually begins, but the students appear to be unaware of this. Their attention is focused on their activities.

The atmosphere in Janet's class can best be described as "quietly reassuring." While in fourth grade, most students experienced the "Workshop Way" approach to instruction. As a result, Janet found the students to be competent in selecting what needs to be done in the classroom and in moving from one task to the other without a great deal of supervision. The students' independence and sense of responsibility have created an atmosphere and attitude for learning that she believes enables her to provide different types of experiences in the classroom.

There are a number of classroom activities Janet has incorporated to help meet the needs of her more advanced pupils. On this particular day, the Math Olympiad class is in progress. Nineteen students from the four fifth-grade classes have demonstrated knowledge of the regular math curriculum for this month. They have been invited to meet with Janet twice a week to work on challenging math problems. The selection process is rather simple. Students who have above-average math achievement test scores and have "pretested out" of the regular curriculum are in the group. Those that "we have a hunch are good at math" are also included. The present group includes eight children of minority populations and a child identified as learning disabled. The other three fifth grade teachers work with students who have not mastered the new content and skills during Math Olympiad time.

The Math Olympiad students gather in Janet's class, talking excitedly about today's challenge problem as they take their seats. In a soft voice, Janet reviews information related to a problem about the concept of volume they tried in the previous class session. A major snowstorm has hit the area, and each student is trying to find the volume of snow that will be plowed from the various driveways in the neighborhood. The students are asked to share the different ways they have solved the problem. Each process is duly recorded on the board and praised for its diversity of thinking. New, increasingly complex problems are presented to the students; they are all related to area and volume in a variety of situations. The students become more and more excited, shouting out ideas, and experimenting with different ways to arrive at answers. One group is trying to use paper cutouts to solve a problem. Two other students watch them and begin their own version of paper folding to arrive at a solution. James, identified as having a learning disability, works alone but watches the group closest to him. When they run into difficulty and quickly become frustrated, James shouts out a few "hints" to them that gets them started again. Then he quietly goes back to work with his calculator and drawings. Janet moves up behind him and tells him how helpful he has been to the group. Three girls walk up to Janet to tell her how "way off" they were in their approach but that they are "on the right track now." They move off without showing her their work; they seem to need to verify that they are making progress. Janet continues to move from student to student, questioning them about how they derived the answers to the problems. During the last five minutes of the session, the students meet together to discuss one particularly difficult problem involving a 16 by 16 foot hamburger. After discussing various strategies that might be helpful, the students become alarmed about the condiments that would be needed for this hamburger—what would be the volume of mustard and ketchup needed?! The math class ends at this point, and the students return to their regular classrooms.

There are other opportunities for advanced students to learn different content at different rates. Simple modifications are made in the spelling assignment each week. Lindsey and Kari, the advanced readers, usually make perfect scores on the weekly spelling test. Janet allows them and other students to take a pretest of the regular spelling words on Mondays. Lindsey and Kari usually show mastery of the words and are paired to work on "advanced vocabulary" for the rest of the week. They select words that they do not know and teach each other their meaning and spelling of the words. Janet tests them on the advanced words later in the week. Sometimes other activities can replace spelling for these two girls. Lindsey brought in a copy of one of Shakespeare's plays to share with Kari. Janet is surprised when Lindsey asks her permission to allow Kari to read the play. Lindsey explains, "I know Shakespeare is not very popular at this time, but I really feel he will be appreciated again soon." Clearly, Janet is amused and impressed. It is unusual for children from this neighborhood to know about Shakespeare. She gives her permission for this "modification" of the daily lessons.

On a daily basis, Janet modifies lessons during whole group instruction "as best I can" to offer advanced students a challenge. In a lesson on tall tales, the class is asked to analyze elements that make the Paul Bunyan story they have read a tall tale. Humor and a blend of reality and exaggeration are identified as the basic elements. Janet asks for examples of this, and the class goes wild offering ideas. It becomes easy to see that this is a time during which Janet can begin to identify students who are more advanced in their understanding and thinking. The questions continue: "What are the clues that told you this? What would happen if? How could you change this?" Janet then offers ideas for the students to write their own tall tales. She gives worksheets that are more directive to some but adds they do not have to use them if they feel comfortable with the assignment. "It's only a guide," she says. To others, Janet gives "idea starters" that are more challenging. The results from a previous reading and writing assignment are on display on the "Writers' Corner" bulletin board. Some of the stories are on worksheets and are rather basic, while others are 4 to 5 pages long and much more elaborate in detail. The message to the students is that it is all right to be at different levels of ability in this class. As Janet puts it, "I may not be doing enough, but I try not to get in the way of my students."

Modifications for the talents and gifts of students also happen on an individual and unusual basis in Janet's room. Danny is an example of this type of modification. When Danny began fifth grade, he had been identified by previous teachers as a "handful" with many behavior problems that prevented him from learning in the classroom. He had been accused of lying and stealing for as long as he had been going to school. There was a very real possibility that Danny would soon be in a program for emotionally disturbed children. A series of events led Janet and her colleagues to view Danny very differently and to try a different educational approach.

When Danny began this school year, he could not sit at his desk for any length of time and appeared to be inattentive and easily bored. In order to help him control his disruptive behavior, Janet gave him special duties when the class went on restroom breaks. He was in charge of checking to see if there were enough paper towels and toilet paper in the stalls and if the students were leaving the bathrooms in clean condition. Before long, Danny asked Janet if he could help the custodian complete some repairs in the restrooms. Janet agreed that this would be a good job, but that Danny would need to demonstrate "professionalism" by completing his work and controlling his behaviors in class. All the fifth grade teachers agreed that Danny began to show more potential in the classroom than they had anticipated. The greatest sign of Danny's abilities occurred when there was another theft in the school. The table from the school nurse's office was missing, and many faculty assumed that Danny had something to do with the theft. In fact, Danny had removed the table, but as Janet explained, it was "not a theft." The fifth grade teachers

discovered the table in the basement of the school where Danny had set up his "office" as the custodial assistant. On the wall by the desk, Danny had posted a "work schedule" for other students he had convinced to "work for me." He had also located unused soap dispensers that he mounted on his own in some of the restrooms. Several other sheets of paper around indicated that he had organized materials and time for the improvement of the custodial services at the school. As Janet and the other fifth grade teachers explained it, Danny was not guilty of a crime at all; he had started his own business! They feel he demonstrated exceptional abilities and skills not often seen in children his age. Janet continues to make many attempts to capitalize on these abilities. As a result, Danny's behaviors and others' perceptions of him have changed dramatically.

## Grade Level Curricular Modifications

Curriculum modifications involve all the teachers on the fifth grade team. Once a week, students take part in enrichment classes planned by Janet and her three teammates. The sessions take place during what would normally be reading time, and all the students participate. A variety of options are offered, however, that have been designed to match the ability levels and interests of individual students. Previous topics included short story writing and creative thinking skills. Today, 12 students who are advanced in math and have a strong interest in art are spending an hour with Sharon, another member of the fifth grade team. The topic is architectural perspective. Students work in pairs as they review information from last week's class—drawing a two-dimensional representation of a three-dimensional structure. Some students are seated on the floor, others are at desks, and a few are standing at the back of the room as they respond to Sharon's questions. Once the students are ready, she prepares them for the next step. They will be constructing a building model of their own design and creating a blueprint to aid in replication of the model. The only criteria they must follow is to make the structure as tall and stable as possible. An assortment of blocks and pieces of wood and plastic is available for the activity. All the students immediately begin the task, working quietly and diligently. The only sounds in the room are low conversations about appearance, methods of construction, and occasional exclamations as a structure wobbles or comes crashing down. Two girls begin to draw a crowd as their building reaches from the floor to a level higher than the top of a nearby desk. They point out to the others that the building is not only tall and sturdy, it is attractive in design as well. As the other students rush back to their structures, there is renewed energy in construction. Sharon does not interact with the students until they begin drawing their blueprints. This is a real challenge for the children, and there are many complaints about how confusing it is to draw something from a top view. Sharon encourages most of the students to continue working on the task. A few discuss simplifying their buildings to make the drawing easier to complete. The hour is almost over, but it is obvious that the children are not ready to stop. Sharon asks them what they would like to do. It is agreed that she will ask the other teachers if they can have an additional enrichment period this week to complete the activity. The students quickly finish sketching blueprints of the structures. They will have to rebuild them for the additional session and leave the room discussing their plans.

In addition, there are opportunities for students with talents in the arts to pursue interests in those areas. Although these opportunities are not offered as frequently as the academic options, they include many students who might not ordinarily be recognized as gifted. Angela, the student who was suspicious of my classroom observations, is one such student. She is an African-American student who is above average in language arts, excels in dance, and is a dynamic leader in the classroom. She has little patience with other students who are not diligent workers and is quick to organize any situation to ensure optimal performance. Because of these characteristics, Janet included Angela in an extracurricular activity. An exclusive private school on the other side of town expressed an

interest in having some of their drama and dance students perform for public schools. Janet and the fifth grade team thought this would be an excellent opportunity to exchange talent and offered to have some of their students perform for the private school. Angela has been selected to work with the East Meadow Elementary music teacher in choreographing a performance of the song, "Lean on Me." During rehearsal for this event, Angela is clearly dissatisfied with the lack of enthusiasm by the other performers. This is demonstrated by her body language. She is leaning against a blackboard with her arms crossed and staring at the floor when the group stops after one verse. The teacher asks what is troubling her, and Angela states that some of the others do not really seem to want to be there. The teacher asks Angela for suggestions to make the performance "more lively." Angela is asked, "What did you do when you performed this song before? How could this be better?" Angela becomes the "expert," using her talents and interest to help the group.

## The Fifth Grade Team

Three additional teachers make up the team with which Janet works. The team members are diverse in teaching styles and personal characteristics, but this diversity is viewed as a strength. Janet and Irene have completed graduate course work in gifted education, while Deborah and Barbara are enrolled in a Master's program with an emphasis in learning disabilities and behavior disorders. As Deborah said, "We have every type of child covered by our training." Irene agrees, believing that her training in gifted education has "boosted the level of learning of all the students in my class." All four teachers participated in district workshops on the basics of differentiating curriculum for gifted children and have attended conferences and other training sessions at their own expense.

"Boosting the level of learning" seems to be a primary concern of the fifth grade team. According to the four teachers, there are other good things happening educationally at all grade levels in the school, but none compare to the efforts of the fifth grade team.

"We are all different . . . very different, but we work so well together, really respect each other. There's lots of planning and we share our ideas. The gifted kids are not the domain of just one of us."

This mutual respect is evident when the four teachers meet for lunch each day. The conversation begins with a genial discussion of student antics. There is no disrespect for students in the conversation, particularly when discussion turns to one student who is having difficulty at home. From there the conversation quickly moves to an exchange of praise for the work each teacher is doing: the multicultural display they are all working on, Barbara's ideas for activities with the enrichment groups, and Janet's ability to integrate social studies and language arts activities.

One way in which the team generates enthusiasm for teaching as well as developing new ideas is "Ol' Mexico Night." Once a month, the four teachers meet for dinner at a local restaurant (Ol' Mexico) and spend hours talking about new enrichment activities. Irene says, "Among the four of us, we have some really spectacular ideas that come out of these dinners. That way we can go 'gung ho' through the basics and spend the last part of the grading period doing more advanced work with all students, but especially the bright students." But Ol' Mexico Night can be frustrating, too, according to Deborah: "We want to pull all these new ideas in, and we do sometimes. But I feel the schedule is too inflexible now to do all we could do. We plan, but we need more planning to make this really work." Other members of the team agree, stating that there is much more that could be done for talented, advanced students: "We never feel we are doing enough. We provide some enrichment but there's never enough time. I guess if we think about it, we do a lot considering the circumstances."

The fifth grade teachers think the school schedule is a major roadblock to providing advanced learning experiences for their students. They have found ways to work around that difficulty on numerous occasions. In a lunchtime discussion, Barbara and Irene run an idea by the group to see how supportive of change they might be. They propose that periodically all the fifth grade teachers do "major compacting" of the basic reading curriculum so some students can cover the basics on the first day of the week: "That way they can use the rest of the time to do enriched activities and get involved in long term projects. Otherwise they really don't have time to do these advanced things." Janet agrees that this is a good idea, but that some very "thoughtful planning" will need to be done to make a major change like this. Not surprisingly, Barbara suggests another "Ol' Mexico Night" so the idea can be developed further.

## The Building Principal

The building administrator for East Meadow is Dr. Shelcroft, an energetic, slender woman with upswept white hair. During a meeting with the researcher, she moves quickly about her office, gathering materials for an upcoming parents' meeting, and simultaneously answering the phone and responding to questions from the office staff. She is constantly in motion, quick in thought and in conversation as well. She is viewed by teachers and parents as a driving force behind many of the projects and activities that take place in the school.

Dr. Shelcroft has been at East Meadow for four years, and during that time has seen a number of changes take place. First and foremost on her mind is the PTO Meeting of Southeast Asian Parents that will take place this evening. As I enter her office, she says, "These parents are very concerned about the level of math their children are getting here at East Meadow. They want us to challenge their children more in math. Do you have any good ideas for how we can improve the math program quickly? It really needs to be done and these parents pushing for this is the motivation we need to do something." Dr. Shelcroft appears to approach many issues that face her school in this way. There is no delay in addressing a problem as she tries to find the person or persons who have the expertise to solve the problem. This has been her approach in addressing the needs of gifted children at East Meadow.

Dr. Shelcroft believes there are two ways to meet the educational needs of students at her school. The first is to get parents involved in the education of their children. She has accomplished this by establishing numerous parent committees and volunteer groups. There is now a "School Achievement Committee" which looks at the issues of gifted education and the general improvement of education for all the children at East Meadow. According to Dr. Shelcroft, the existence of this committee has demonstrated how the school values the strengths of the parents and has helped teachers and parents seek out the talents of children. "As a result, we are recognizing and addressing more talent areas; there has been a major attitude shift. The parents and the kids just blossom!"

There are other committees and programs she has promoted to involve parents. They include the special PTO groups (such as the Southeast Asian Parent Group that focuses on issues specific to various cultural groups), as well as the general PTO, joint grant-writing programs for parents and teachers, the School Climate Committee, an informational library for parents, and the Rockin' and Reading Volunteer Program. According to her, "The parents have to SEE we care and that we need them. That's been the first step here to challenging the students." The way she has accomplished this is to "identify the different kinds of parents we have, both developmentally and in terms of interests and concerns. Then we have to develop different kinds of programs for them.

It's really very similar to what we are trying to do for the children—like meeting the individual needs of the gifted and other groups in the school."

The second approach Dr. Shelcroft has used to help meet the needs of gifted students is "management by wandering around." This informal evaluation of the school involves several components. She said,

> I visit the classrooms, and I notice what's going on. I look for examples of good, exciting teaching, and view how well the lessons are integrated. I also listen to the teachers. They usually seek me out to share their ideas and what they are doing. There's a lot of talent here. I don't have the ideas, but I know whom to go to for the ideas. And I don't hesitate to ask for ideas, and then I get out of the teachers' way.

In her opinion, it has been this "hands off" approach and her sincere interest that has enabled the fifth grade teachers and Janet to develop so much for gifted learners in the regular classroom. As Janet states, " Dr. Shelcroft has been supportive; she is excellent at establishing a strong cross-cultural staff and encouraging us to try out our ideas."

### The School Achievement Committee

Until recently, parent involvement at East Meadow has been minimal. The School Achievement Committee was organized to encourage parents to share their ideas and to develop specific plans to improve educational options for the gifted and all children in the school. The committee is composed of several teachers, including Janet, and a few parents, mostly mothers. The number varies based on the activities of the committee. The committee selects a focus for each year, and this year's is language arts and writing skills.

The School Achievement Committee has come up with several ways to improve reading and writing curriculum for the East Meadow students. Mrs. Alverson, parent of a third grader, has received some training in gifted education techniques. She conducts a Junior Great Books literature program each Tuesday morning. Students who meet a formal set of criteria (high reading achievement scores, above-average grades in school) as well as ones whom teachers simply think have above-average potential are included in the group. The committee has also advised that inservice training for teachers focus on reading and writing this year. Classroom activities reflect this emphasis. There is an increased use of whole-language instruction at several grade levels. Many students are developing writing portfolios from which they select works to revise and polish. Journal writing has become a standard practice in the fifth grade. There has been a lot of enthusiasm for this educational option, but not surprisingly, the committee does not feel it is enough. According to one member, "We need at least two special classes per grade level for these kids—different things for different types of gifted kids."

A concern for "different types of gifted" has led the School Achievement Committee to investigate a variety of ways to identify children who need more advanced instruction. To this end, they have enlisted Janet's help. She is currently enrolled in a graduate research course at a nearby university, and the committee has suggested she address the identification issue as part of a project for the course. According to Janet, "The focus of improving identification is very important to us. I guess I'm spearheading this by taking this class."

The School Achievement Committee already has its focus for next year: As one spokesperson said, "Because the students are so different here, and so many are not getting what they need, there is a real feeling of a school wide focus for next year. We want to

have the same unified vision here—not just the few of us on a committee who are concerned about the potential of these children, about the gifted kids." Prior to the establishment of the committee, few parents recognized the "giftedness of their children" and fewer still had any expectations of their children being challenged in the classroom. That has changed over the past two years: "We actively discuss students' abilities and strengths with teachers and parents now and can describe the challenges we want to provide for their children. Now we are all thinking ahead—thinking about college for our children, and thinking about how to present math and science much better."

## Conclusions

There are several key components that contribute to the education of the gifted in Janet's classroom at East Meadow: the teacher, the fifth grade team, the various classroom activities for students, as well as the actions of the principal and the various school committees. There are underlying elements which enable these practices to take place, however, and which encourage these people to do an effective job of challenging bright students in a difficult setting.

### Attitude and Atmosphere

Good things happen for bright students in Janet's classroom, and they do not happen by accident. The administration and teachers intentionally create an attitude and atmosphere at East Meadow that enable effective educational practices to take place. Time and again, parents, teachers, and administrators use the phrase, "We need to do so much for these children, but we are not doing enough." There is a strong desire, or "passion" as Janet says, to discover the strengths of students at East Meadow and to develop those strengths.

In the classroom, this attitude is expressed with phrases such as "Don't get lazy, you know you can do this with a bit more time," or "You're way ahead of me on that lesson. Good for you!" And "You decide what to work on when you finish, but always remember you want more of a challenge." The message to the students is that the classroom is a place where challenges are the norm and where one can progress as far as possible. Gifts and talents are recognized and celebrated.

There is a dedication to education among the teachers of the fifth grade team. Each has pursued additional training, often at her own expense, to learn more about the needs of gifted and other special populations of students. Teachers also have devoted long hours outside of school to plan for these groups of children and to supervise extracurricular activities. There is no doubt in the minds of Janet and her colleagues that different children learn differently and that the purpose of the school is to adjust as best we can to those differences.

### Knowledge

There is recognition that some of the East Meadow students are gifted in academic and other areas. More importantly, there is recognition that it is important to understand the different challenges gifted students present in the classroom. There is a strong foundation of knowledge about the characteristics and needs of gifted children among the fifth grade teachers. Two of the four teachers have or are pursuing advanced degrees in education of the gifted. One teacher, Barbara, has begun training through the district as a "cluster teacher" of the gifted and is thinking about taking course work in gifted education that goes

beyond her current Master's degree. Deborah has taken graduate level coursework related to the education of children with learning disabilities. She believes that this background in addition to the information shared by her teammates is providing her with the knowledge she needs to better help the gifted population. All the teachers take advantage of available workshops, conferences, and inservice training.

The fifth grade teachers are knowledgeable in the area of education of the gifted. In addition, their expertise is recognized by the administration, and they are encouraged to use and to share that knowledge with others. Dr. Shelcroft is cognizant that Janet and her teammates know more about this area than she does. She is wise enough to "get out of their way so they can do their job."

## Autonomy

Time and again, Janet and the fifth grade team comment on the restrictions of the schedule and the limitations of prescribed curriculum the school district endorses. They see these effects as roadblocks to raising the educational level of all the students in their classrooms. However, they have been given (or have taken) a level of autonomy in planning.

Janet and her team colleagues have restructured the daily schedule to include enrichment and accelerative activities, often spontaneously shifting the focus of content or time blocks to accommodate new ideas or specific student interests. Also, they work in cooperation with school committees in deciding which strength areas or areas of concern in the classroom will be emphasized. The building administrator encourages this type of initiative: "I don't like to read dull lesson plans; I look for a positive room climate, creative, diverse, changing lessons. . . . I don't want to see turkeys on the wall in March."

## Planning

Another key to successfully meeting the needs of the gifted at East Meadow is the degree of informal planning that goes into implementing differentiated classroom practices. For example, on "Ol' Mexico Night" the teachers meet at a local restaurant to discuss enrichment and acceleration ideas and special projects for students. While there is little time provided for teachers during the school day for planning, it appears that having this opportunity is crucial for actual implementation of differentiation in the regular classroom to take place. As Janet says frequently to her colleagues, "This has to be planned carefully if it's going to work." The fifth grade team has taken the initiative on this issue, creating time to accomplish this task on their own time.

Planning also takes place in the form of the School Achievement Committee meetings. Committee members meet on a regular basis to determine goals for the year and to develop an action plan to implement these goals. While many members believe that the goals are "too small," topics of discussion often do get accomplished as a result of brainstorming and careful planning.

## Differentiated Classroom Practices

Many classroom activities for advanced students in Janet's classroom are based on the principles of curriculum differentiation for the gifted (Maker, 1982; Renzulli, 1977). She provides enrichment opportunities that involve student choice and advanced, complex activities based on students' strengths. There is periodic pretesting to streamline the basic curriculum for learners, so that several students have been able to move through the regular curriculum at a faster pace than their classmates. In addition, all students are told *why* they

are engaged in certain learning activities. Janet frequently tells students that some basic activities are "boring, but your brain will work much faster and you will be able to do more creative things if you know the basic facts. That's why we're memorizing these things today." Students move beyond the basic facts in Janet's class and apply knowledge in a variety of projects.

When whole group instruction takes place (a strong emphasis in the school district), a variety of open-ended options are offered to students. For example, there is the display in Janet's room called "Writer's Block." Students' writing projects cover the wall, representing individual students' attempts to master various skills that may have been presented to the whole group. No two papers on the wall, however, are the same. Each student has written something according to his or her ability and interest. As a result, children with advanced abilities in writing progress at a different rate and in a different manner from others who received identical instruction, but may not have mastered the basics as quickly.

Students are encouraged to pursue their own areas of interest by designing their own projects or learning activities from time to time. They are also urged to explore new areas of interest through enrichment activities. Most of all, students have opportunities to share their areas of expertise and to be recognized for their capabilities and talents.

## Evolution, Change

Services for the gifted and talented in Janet's classroom have evolved over the years. The fifth grade team is constantly assessing what needs to be changed and what still needs to be done ("We never feel we are doing enough. We know we are not doing enough."). As the teachers gain confidence in their ability to meet the needs of different students, they are able to add, eliminate, or modify instruction accordingly. Over the past few years, programs such as the Wednesday enrichment sessions have been added, while the reading program has undergone intense scrutiny and is in the process of being changed to become more challenging. The faculty at East Meadow is "not afraid to change."

## Support

No one stands in the way of Janet, the teachers, and parents who are attempting to elevate the educational experiences of gifted learners at East Meadow. In fact, they are praised and encouraged by the school faculty, staff, parents, and especially the students. It is a given that challenging the advanced learner will improve the school as a whole. Although resources are severely limited, the building principal encourages the teachers and committee members to take the initiative on educational issues.

The most important source of support for the education of the gifted comes from the four fifth grade teachers themselves. They have developed a unified vision of education for their students and work together to attain this vision. They all believe that this is a definite advantage and that their tasks would much more difficult if each were the only one who believed the students needed to be challenged in the classroom.

## Diversity and People

People are the primary resource at East Meadow, and people are utilized extensively to provide children with the best education possible. Dr. Shelcroft describes the faculty, particularly the fifth grade teachers, as "unusual people, wonderful people. I am always amazed by the ideas they have and how they are always discussing and sharing ideas. I wasn't here very long before I recognized how very special these people were."

Diversity is the standard in the school. This is reflected in both the multicultural population of students and teachers and in the variety of ideas and activities that take place. Differences are celebrated, and accommodations are made readily to address differences. There are English as a Second Language PTO groups, special night events to teach different traditions and customs, and a variety of special education programs that have been integrated into the total school experience. Gifted children represent another diverse group for the faculty and community, and they seem to have no trouble recognizing that this group has special needs, too. Dr. Shelcroft states, "There are so many different people here with so many different needs. We want to continue to find ways to get our kids out into the world doing everything they are capable of doing. And we want them to be able to take their parents with them. We have to appreciate differences and empower the kids, the parents, the teachers, the community leaders to be everything they can be."

## Methodological Notes

### Research Methods

The primary purpose of this study was to discover what practices were implemented at East Meadow Elementary School to effectively meet the educational needs of above-average ability students in Janet Mason's fifth grade classroom. Another purpose was to discover what elements in the school appeared to contribute to the practices being implemented. An ethnographic approach was used to investigate the nature of the students, teacher, and events in the class. I spent 11 days at East Meadow Elementary School over a two month period. The typical day began at 7:30 a.m. as Janet was preparing for her day. While most of my time was spent in her classroom, I also visited the classes of other teachers and support persons who taught or provided services to Janet's students. The day's observations and interviews usually ended at 3:00 p.m.

Data were recorded as field notes and interview notes. These were transcribed, added to, and edited following each visit. Information from the notes were analyzed inductively for categories and themes that addressed the research questions of the study.

### Informants

I conducted interviews with key informants in the school—gifted fifth grade students and other students, several teachers at various grade levels, the building administrator, and members of school and community committees. I recorded field observations in fifth grade classrooms, in the teachers' lounge, at faculty meetings and inservice sessions, at student rehearsals and parent meetings, at faculty parties, and in the school office. I attempted to be a non-participant observer while documenting events, but was sometimes dragged into participation in activities and discussion by the students and teachers. Although I was reluctant to compromise my objectivity in this way, I decided I would draw even more attention to myself by resisting their invitations. I did limit my involvement when the students wanted me in the class picture (because I had spent so many days in their classroom).

The study focused on several key people. These included Janet Mason, her students, four high ability students in her class, Janet's three fellow fifth grade teachers, and the principal. Conversations with these individuals centered around classroom practices for advanced students, student performance and behaviors, attitudes toward and opinions about the education of gifted children, and school activities and policies that supported efforts to serve these students. In addition to interviews, these individuals

allowed me access to school records, examples of student products, and documents related to the purpose of the study.

## References

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# CHAPTER 3: Successful Practices at Westhills School

Thomas Hays, Ph.D.

## Setting

Eastville is located in the eastern part of a rural midwestern state within twenty miles of the state's largest city. Eastville's population (1,400) is growing rapidly as housing developments replace agricultural land. Recently, voters passed a $3.65 million bond issue to remodel two schools, buy land for another, and update technology in the existing buildings. City leaders are starting to see a change in their community. One business leader said, "Eastville is changing from a rural environment to a suburban-rural environment. It's a real good mixture."

Westhills, the school selected for this study, is one of three K-5 elementary schools in the district. It was constructed in 1961 and has a current enrollment of 300 students. This school has 12 classroom teachers, an enrichment teacher, 9 special teachers, a counselor, 2 program coordinators, a librarian, and a principal.

The school is located in the center of the town about two blocks from downtown near the central administration offices. Due to continued growth, the school has outgrown the physical building. Two portable classrooms and space at the central office supplement space at the regular school building. Classrooms are well equipped with materials, books, and manipulatives. The interior is decorated with student art work and projects. A visitor discovers a warm atmosphere and a building that bustles with activity.

According to informational brochures, Eastville's Public Schools and Westhills Elementary School are "committed to an educational program that recognizes the unique characteristics of the students and strives to advance to the fullest all aspects of the students' development. . . . Eastville's gifted and talented program is an integral part of this commitment."

The gifted program, called SOC (Special Opportunities Class), is designed to extend the learning environment for high potential students. Students in the primary grades are served in the regular classroom by the gifted coordinator who provides consultant services to teachers. Consultant services continue through fifth grade, but students who demonstrate high potential or performance are provided with challenging educational opportunities. Omnibus classes, academic competitions, and computer classes are also included. Each elementary school has a building coordinator who assists the gifted education coordinator in providing services, by request or referral, to teachers and students.

## Informants

The informants for this site consisted of classroom teachers, the administrator, the gifted education specialist, building facilitators, and teachers from other schools in the district. Nearly all the teachers at Westhills were observed once, and several were observed more than once. The SOC classes, field trips, regular classroom and enrichment classes were also observed. Parents, school board members, central office administrators, and former students were interviewed. Documents were obtained, examined, and

analyzed. A total of 22 interviews and 18 observations were conducted over a three-month period.

# Findings

## Differentiation Techniques and Strategies

Different types of instructional strategies and differentiation techniques were used by classroom teachers at Westhills School to meet the educational needs of gifted students. Classroom observations and interviews were conducted with teachers, administrators, students, parents, and community members to identify these strategies and modifications. The data were coded and analyzed and then categorized. The findings are presented here in two, broad categories: curriculum modifications and instructional strategies.

### Curriculum Modifications

Teachers made modifications in the curriculum to meet the needs of gifted students. Students who worked at a faster pace or who had the ability or interest to pursue a topic in greater depth, needed a different curriculum than regular students.

Curriculum Compacting

The term compacting, as used by several teachers at Westhills, means determining what content or skills the student has previously mastered. Teachers eliminate the work that the students already know and substitute enrichment or acceleration material. Spelling was the content area chosen most often for compacting. One teacher compacted the curriculum for her entire math class.

A student recalled that his program was compacted in spelling and math, but remembered "There was a problem with something to do instead." Another student took pretests in math and spelling but was disappointed that, "We still had to do all the work." A third student's program was compacted in spelling and "in math, if you got 100% you could go on to something else." A seventh grader recalled his fifth grade experiences with compacting. "In fifth grade we did a large project and we compacted math, English, and spelling. In math we did more math, but in social studies we made songs and oral reports to the class: that was much better." A parent recalled that her two children were "tested out" of spelling.

Enrichment

Enrichment at Westhills School means adding breadth and depth to a curricular unit or topic for those students who have the interest or ability to gain more from the unit being taught.

One teacher explained it this way: "I provide enrichment and eliminate some work, especially in the skills." When students finished their regular math assignments in this room, they chose enrichment activities like math rods, pattern blocks, or other manipulatives. A math center containing many enrichment activities and materials was often used by the students in this classroom.

The gifted program coordinator's schedule enables her to work in each school for a week at a time. For example, she is at Westhills one out of every three weeks. Teachers can request that she work with their classes on a specific topic or activity. She was observed several times delivering whole class instruction and presenting an enrichment

activity that supplemented the regular curriculum. The gifted coordinator works with gifted students within the context of the regular curriculum. For example, she and a fifth grade teacher taught a unit together on logic problems. The students spent several days solving and writing their own matrix logic problems.

In interviews, students remembered a variety of enrichment activities during their elementary years. They mentioned puzzles, computers, Junior Great Books, field trips, robotics, and plays.

In addition, academic competition programs were available to students through the gifted program. Odyssey of the Mind, based on creative productivity, is generally thought of as an enrichment activity by the teachers and students. Future Problem Solving, a creative problem solving process, also has some attributes of enrichment.

Advanced Level Content

The teachers at Westhills teach content and use materials that are above "normal grade level." The teachers believe that using advanced-level materials helps meet the needs of bright students within the context of the classroom. One teacher commented, "In social studies and science the higher levels [high ability students] will be given higher level projects that go above and beyond [the content of their grade level]."

Math textbooks have some advanced-level content material built into the series. A teacher said, "The new math series is set up for higher levels. It helps to set it [advanced-level material] up, to eliminate work, and to work at a faster pace."

A group of former students was involved with an advanced math project. Other students recalled writing projects and working with Junior Great Books. French classes and a computer club that taught programming and Logo were also mentioned.

Research Projects

Teachers encouraged their gifted students to get involved in research projects that enabled them to assume the role of a producer. Teachers encouraged the development of advanced level products and encouraged appropriate audiences for the presentation of products.

Science classes provided opportunities for students to complete research projects. Science experiments and research projects were displayed and judged at The Eastville Science Fair. The invention program also includes research projects. Students are required to complete historical research on inventors, create an invention, and do experiments on their inventions. They are encouraged to do interview and survey research to market their product and present the results at the invention convention.

Student Evaluation

The teachers at Westhills School gave their students an opportunity to conduct self-evaluations of their work and activities. The gifted coordinator asked students to evaluate enrichment activities in the regular classroom. When making speeches or presentations, students established criteria and judged their own performances. Another teacher used "evaluation sheets" to keep track of individual progress while reading novels in class. The students recorded their completed assignments and tasks on these sheets.

Acceleration

An example of acceleration in Eastville revolves around the story of a student named Carlos. In fact, the Eastville gifted program was developed and expanded because

of Carlos. The following account of his school experiences is based on interviews with his mother and with Carlos, who is now a junior in college.

Carlos came to kindergarten reading at the eighth grade level, performing math at the fourth grade level, and scoring at the 12th grade level on vocabulary tests. The boy was a natural candidate for acceleration. His first hurdle was the kindergarten teacher who wanted to fail him for not being able to skip across the room. In third grade he won the state competition for young authors. He was accelerated from third grade math to fifth grade math, but he did not find the upper grade challenging. Carlos remembers that "Basically it was the same concepts, not too much difference, just juggling more numbers." In seventh grade he scored a 690 on the math portion of the *SAT*. When the school bought its first computer, Carlos taught the teachers how to use it. When Eastville Schools could no longer provide Carlos with math instruction, he enrolled in a university for his math classes.

He found his first university math classes very easy. His mother recalled, "After he took his first test, he cried [because of the lack of challenge], and this is when his mother started riding a broom." The head of the math department suggested that Carlos test out of his first two years of calculus (which he did). He also tested out of English so he could graduate early from Eastville High School. He earned 23 credits at the university. After graduating from high school, he enrolled in a university in a neighboring state. Carlos participated in summer programs for students with exceptional math abilities; he now teaches classes in the summer programs that he attended.

Carlos and his mother give the Eastville School District high marks for working to meet his needs. As his mother states, "Carlos was a learning experience for Eastville, and they did an excellent job of adapting." Other students were also accelerated at Eastville, especially in math, reading, and spelling.

## Instructional Strategies

To meet the learning needs of gifted students, the teachers at Westhills used several strategies within the context of the regular curriculum.

### Higher Order Questioning

Higher order thinking skills are defined by teachers and administrators as the highest three levels of Bloom's Taxonomy (Bloom, 1956), namely, analysis, synthesis, and evaluation. Teachers encouraged higher level thinking through skillful questioning. One teacher remarked, "We bring them [students] to a higher level through assignments and questioning." A third teacher stated, "Everyone is creative, and I give questions that they have to work on. I pose 'what if' questions."

Teachers were observed using higher order thinking questions. For example: Do we know why? Does he seem stubborn to you? What have we learned about this character in the story? [The students are instructed to work with their story map. More questions followed.] Do we have a setting? Do we have a problem? Can we guess? If you have a prediction, write it down using the prediction chart. Write what you think about chapter three (from a fifth grade reading class).

Who knows the difference between a pattern and a rule? We made some rules like odd times odd equals odd, and odd times even equals even. We are going to look for patterns. Who would like to share a pattern? Tell me one pattern? Can you tell me what a pattern is? Okay [student] is sharing that it is going from one number to another one. A

pattern is something that you see that is repeated. Now what is the difference between a pattern and a rule? (From a third grade math class).

Ability Grouping

Ability grouping enables teachers to group students based on ability or achievement in order to provide differentiated curriculum and instruction. This practice has been discouraged by some educators as being unresponsive to the needs of middle and low ability students. The teachers at Westhills School are struggling with the practice of ability grouping. Some teachers believe that when used properly, ability grouping is an effective practice to use with gifted students in the regular classroom. Other teachers are moving away from ability grouping because of the current trend toward heterogeneous grouping. One teacher said, "I met the needs of my bright kids when I had ability grouping. Once or twice a week I still go to homogeneous groups." Another teacher expresses a different view. "This year we have heterogeneous groups because of a directive from the state department. I try and enrich [within these groups]."

Math and reading were the most popular subject areas for ability grouping. In a fifth grade math class, 29 or 30 students were grouped by ability. A second grade teacher said, "I have math groupings when they work on problem solving or a project. The groups share with the class . . . the entire thing [lesson] is planned by the students."

One parent saw the "pull out" component of the gifted program as an ability group that met her child's needs. The parent said, "The gifted program placed him with kids that he could talk with and who think on the same level. It is important not to talk down to people or feel different."

The students who were interviewed recalled ability groups used in math and reading. One seventh grader explained that being grouped in reading was "much better, but it still was too easy." Another student remembered her math group:

> We got to do some research on numbers. It was really fun; in math we were in small groups, . . . [the teacher] worked with us, and some of us got to go on . . . [the teacher] gave us challenging work, but it got us down: when you are smart, all they want you to do is work.

Student Choice and Interest

Data collected for this study indicated that many teachers used the instructional strategies of student choice and student interest. Such techniques allow students to have some say in the way that they learn and in the topics they study. Choices are usually based on student interest.

The teachers at Westhills provided their students with a choice in assignments, projects, and topics for study. One teacher said, "I give interest-based assignments; everyone gets the curriculum, but I act as a resource—in the writer's workshop, for example." Two primary grade teachers told about using choice based on interest:

> I do whole group reading. I give them choices. . . . They practice their social skills in groups. I give them choices of what they want to do in their free time.

> You can get some of them, but you need individualized priorities. There is a new emphasis on writing at different levels. I let them choose, and I do like the trend of giving choice. Let the kids make more decisions on where they are headed.

The analysis of data indicated that the use of choice, based on student interest, is widespread at Westhills School.

## Factors That Contributed to Differentiation

The following factors were identified by the researcher as contributing to the use of effective practices at Westhills: collaboration, administrative support, and a common philosophy and beliefs.

### Collaboration

The teachers of Westhills School collaborate in order to meet the needs of gifted students in the regular classroom. Interview and observational data indicated that there was a collaborative effort between the gifted education coordinator and regular classroom teachers.

Gifted Program and Classroom Teacher Collaboration

The gifted education coordinator views collaboration with the regular classroom as a major part of her job. Her supervisor, the Director of Special Services, explained the G/T coordinators role in this way. "The coordinator works with the building facilitators and is working in the classes more. She believes that it is beneficial, and more people are asking for it. She calls it collaborative services."

Collaboration is included in the coordinator's job description, but it is a responsibility of the teacher to take advantage of these consultant services offered. The Director of Special Services said:

> This year we have two kinds of programming. We have pullout [programming] with identified students and enrichment in the regular classroom with a consultant. We offer this so that teachers have more access to our services. We tell the teachers that there are kids in their class who have potential.

Data analyses indicate that classroom teachers value the collaboration and consultation services offered by the gifted coordinator. The following examples illustrate:

> I work with Susan Davis, [the gifted program coordinator] who helped me with a project about Washington.

> Susan Davis has been a help; she is very willing, and it worked real well. She has scheduled her time, and it is up to the teachers to use her.

> They came and told us the program would be initiated by the teacher and is based on the regular curriculum. She comes in and co-teaches; the kids get to work with Mrs. Davis. They did a unit on Native Americans; it was tied to the regular curriculum. She has worked with thinking skills and attribute blocks.

The following observation of the gifted coordinator co-teaching in a fifth grade classroom provides an example of collaboration.

> Susan Davis [gifted coordinator] asked the homeroom teacher how she would like to divide up the class into groups in order that they might work on their puzzles [matrix logic problems] in groups. . . . Both the enrichment teacher and the homeroom teacher walked around the room questioning the students as they worked on their logic problems. . . . Both teachers had a positive relationship with

> the students. . . . Susan Davis will spend four days in this classroom by teacher request during the week that she is in this building.

The classroom teachers, the principal, and the building facilitators collaborate, also. The principal explains it this way:

> We talk about gifted kids as well as special education students. The building facilitators help me become more aware. We hold discussions on what the kids at the top need as well the others [kids]. There is a real joy in working with gifted kids, and the teachers see that.

## Administrative Support

The administration of Eastville Public Schools offers support for classroom teachers to meet the needs of gifted students.

Principal's Support for Classroom Teachers

The principal of Westhills School explains her relationship with faculty in the following way.

> I trust them, and they share well. . . . Two teachers went to a math workshop and are going to share with us. In another city there is an unwritten rule that principals never go into the teacher's lounge. I am in there all the time where there is more discussion of academics. I am a teacher, and the buck stops here, and they [the teachers] respect that. I go in [and watch them teach]. It is a joy. I wouldn't trade that for anything. . . . I build up their strengths and am positive, and then I weed out the deadwood. I build up the strengths of the good teachers. I let them be decision makers, and I treat them as professionals.

The teachers enjoy the principal's support in meeting the learning needs of gifted students. When asked why she differentiated her curriculum for bright students, one teacher answered, "There is the principal. She gives us support and materials. She says, try this and try this. She has created an atmosphere." Another teacher remarked, "[The principal] is very supportive with materials, ideas, articles and in staff meetings. She gives us permission to try things." A third teacher confirmed this by saying "The principal has been supportive. She gives us ideas and permission to experiment."

A student recalled, "The principals were supportive at every level. The principals were great, more than helpful." The Director of Special Services confirmed that, "The principals are extremely supportive; they know it is a resource for them [gifted program]."

Administrative Support/Budget

The administration of the Eastville School District provided the financial support needed to enhance the teaching of gifted students in the regular classroom. The budget included money for substitutes so classroom teachers could help the gifted coordinator teach Omnibus curriculum units. For example, the art teacher reported that the district provided a substitute twice a year for three days so that she could help Susan Davis with an Omnibus unit on art. Omnibus curriculum units, written by Karen Rogers, are published by the Junior League.

The district also hires building facilitators to coordinate building and district activities for gifted students. The facilitators are volunteers that are paid 3% of their base salary to help enhance gifted education in individual schools. Academic coaches for Future

Problem Solving and Computer Club coaches are also paid a 3% stipend. The facilitators and coaches help meet the learning needs of gifted students in the regular classroom.

Students, principals, parents, and community members all agreed that they saw "no problems" with the budget that is allocated for gifted education. In fact, the Westhills principal indicated that the materials budget for gifted students had not been entirely used during the current school year.

## Philosophy and Beliefs

The interview and observation data indicate that Westhills teachers have strong personal beliefs and a common school philosophy for meeting the learning needs of all their students, including gifted students.

As a result of her hiring practices and administrative style, the Westhills principal has assembled a faculty with a common philosophy—one that, among other things, enhanced the goal of meeting the needs of gifted students in the regular classroom. The principal encouraged teachers with a positive philosophy and replaced those who did not support the philosophy. She explained:

> We have a unique group of teachers willing to try new ideas. They jump right in. I have to work with the negative ones if they bring down the group. Then they have to go. The principal has the final say on who gets hired. I try to pick teachers who will get along, that will be open, that will have a good sense of humor, and will have empathy and work with kids. I have a good rapport with them [teachers]. . . . We are more a family than we are a staff.

The Director of Special Services confirmed the principal's efforts to build a like-minded and effective staff. He said that she works to remove people in her building that are not "doing the job."

Teachers in Westhills School cited their own goals and beliefs as reasons for differentiating their practices in the regular classroom. Three teachers commented about their beliefs.

> We are asked to met the needs of all our students, and it is obvious that I have some gifted youngsters. It is a teaching goal, a personal goal, to reach each student. The administration gives us permission to try new things.

> It is a personal belief, sort of part of my philosophy of education. I am aware of my bright kids, and I struggle with it. My own experience as a student makes me more aware.

> She [the principal] has created an atmosphere. It is one of our goals. It is important to us [to meet the needs of gifted students]. It is a building and personal goal. . . . If you are going to be a teacher, then your goal should be to meet the needs of your students.

## The Gifted Program

How does the presence of a gifted education specialist and program for gifted students affect the instruction of gifted students at Westhills with respect to instructional strategies, materials, and training? The gifted coordinator's collaborative efforts with

classroom teachers was discussed previously. The impact of the gifted program and its effect on the instruction of gifted students in the regular classroom is summarized below.

Strategies

The gifted coordinator and the building facilitators provide direct instruction to gifted students. They serve as coaches, role models, and consultants to classroom teachers who are encouraged to use these instructional strategies with students. There is an effort to incorporate higher level thinking skills within the regular curriculum. The gifted coordinator teaches, demonstrates teaching models, and provides services to individual students and teachers.

Materials

The gifted education coordinator provides materials, mostly in the form of books and manipulatives, for classroom teachers. One teacher stated that her class read novels instead of the basal reader, and "The gifted program gave us the money to buy the books." A first grade teacher recalled the "big batch of manipulatives that were paid for by the gifted budget." Parents and former students recalled that there was "never a problem with materials."

Training

Gifted coordinators and building facilitators collaborate and support classroom teachers via a consultation model. Consultation is conducted informally in the teacher's classroom and is carried out within the context of the regular curriculum.

During the current school year, the gifted program coordinator has not offered formal inservice training opportunities for classroom teachers. The district-sponsored general training, known as "inservice," has done little to directly affect the teaching of gifted students in the regular classroom. The education of gifted students was not a topic of these inservice sessions.

Building facilitators are given priority for staff development opportunities such as attending the State Association for the Gifted Conference. The district's formal training efforts included building level meetings to communicate a change in the gifted program from one of primarily "pull out" to a classroom enrichment and consultation model. The district is now gathering data to determine the effectiveness of this new approach.

## Community Factors

What factors exist in Eastville's community setting that influence how the needs of gifted students are met? The most important indicator of community support is the bond referendum that voters recently approved when nine out of ten bond referendums in the state failed this year. A community member discusses this issue:

> This community emphasizes education, and they are willing to talk. The school is the hub of the town. It [the town of Eastville] is centered around the school. The successful bond issue says a lot about the faith this community has in its school system.

Evidence suggests that the gifted program has community support, also. A community member remembered that at first, "People were lukewarm towards talented and gifted. Then parents started coming out of a well, because there were a lot of bright kids who were bored." A school board member added, "The gifted program gets lots of credit; you can do that [teach gifted children] if it is your specialty, and it [this kind of education]

filters down to the special education kids. . . . You can have a gifted program for sports, why not for academics?"

## Themes

### Summary

Westhills School addressed the needs of gifted students in several, different ways. The teachers used curriculum compacting, enrichment, advanced level content, research projects, student evaluation, and acceleration. Teachers also used higher order thinking techniques (including questioning skills), student choice based on interest, and ability grouping.

Westhills teachers were supported in their efforts to meet the needs of gifted children by collaborating with the gifted education specialist. The administration was supportive of teachers' efforts by providing budgetary support for materials, substitutes, and stipends. Differentiation of the curriculum for gifted students was made possible by such factors as a common school philosophy and belief system as well as community support.

### Possible Implications for Gifted Education

Data from this study support several conclusions that may be helpful to an administrator, teacher, or parent who is interested in meeting the needs of gifted students.

Teachers at Westhills have benefited from informal training and consultation as a result of working with the gifted coordinator and building facilitators. This training has taken place in the regular classroom. However, formal training in gifted education has not been conducted recently. Specifically, teachers should be able to identify gifted children, recognize their needs, and implement curriculum modifications and instructional strategies to differentiate the curriculum. These can be accomplished if teachers receive training through university classes, educational agency workshops, and district inservices.

Classroom teachers at Westhills received support and encouragement from the building facilitators, the gifted coordinator, and the building administrator. The gifted education specialist should share materials, resources, and time with classroom teachers. Time is necessary in order to collaborate and plan for gifted students.

In the Eastville School District, meeting the needs of gifted students in the regular classroom is an expectation of classroom teachers. This expectation is included in the school's mission statement, is a part of the district's evaluation process, and is considered in the selection of new teachers.

The principal at Westhills strove to foster a school climate with high expectations. In order to meet the needs of gifted children, teachers should have high expectations of students.

Efforts are being made at Westhills to encourage cooperation between the gifted program and the regular classroom. The gifted education program should be an extension of the regular classroom, not a separate program.

In addition, efforts should be made to enlist the support of the rural community by establishing an advisory committee made up of parents and community members, by implementing a strong communication program, and by designing a broad-based program with broad identification criteria. The gifted program will enlist more community support if the specialist's tasks continue to include teaching enrichment classes in the regular classroom and consulting with classroom teachers. If this is done too often, however, not enough time will be available for serving the identified students. Westhills is working toward finding the appropriate balance of providing enrichment for G/T students in special programs and enrichment in the regular classroom. Every opportunity to communicate with the community through newspapers, community meetings, and invitations should be utilized. It is especially important in rural communities to explain the program and its focus on working with the classroom teacher.

Westhills' gifted education coordinator is creative, innovative, and devoted to all students in general and to gifted students in particular. For the success of any program, it is important to have a person well-trained in gifted education who possesses outstanding human relation skills and a high energy level.

The individual classroom teacher also plays a critical role. Money, resources, and time are important factors, but without a willing and capable teacher, curriculum differentiation will not occur in the classroom. The selection and training of classroom teachers is, after all, the most important determinant of effective practices for bright students in regular classrooms.

## Methodological Notes

### Information Gathering Techniques

### Data Collection

Data in this study were derived from three different sources: naturalistic observation, in-depth interviewing, and document analysis. Naturalistic observations are observations conducted where the events under study actually occur. In-depth interviews are "more like conversations than formal structured interviews," making sure that the informant's perspective should "unfold as the participant views it, not as the researcher views it." Appropriate documents were requested from subjects which provided a more complete picture of the site being studied.

Observations were conducted in the community, school, and selected classrooms. These observations had no specific structure, but were guided by an established procedure. The researcher's purpose was to approach the site as one who was new to the setting, "an interested stranger." While the classroom was the primary focus of observation, information gained through interviews led the researcher to further data collection.

In-depth interviewing, or a "conversation with a purpose," was conducted with classroom teachers, the principal, curriculum coordinators, gifted education specialists, students, parents, and community members. The semistructured interviews consisted of open-ended questions designed to explore a few general topics to gain information in "the subjects own words." Similar "Grand Tour" questions were asked of all subjects to obtain their viewpoint on the research questions that guided the study. Responses to these general questions guided the direction of the interview.

Formal documents (e.g., official board policies), as well as informal documents (e.g., samples of student work) were collected from subjects. The researcher reviewed documents while conducting observations and interviews; this provided a clearer picture of the site being studied.

The site was observed numerous times throughout the school year until data saturation occurred. A total of 22 interviews and 18 classroom observations were conducted over a three month period. Field notes were made during the observations and interviews and were transcribed as soon as possible after an interview or observation.

## Data Analysis

Transcribed field notes and copies of documents were read, numbered, and coded indicating the site and data gathering technique (i.e., interview, observation, or document). The data were then reread to develop a coding system for the text data. The data were examined for patterns, topics, words, and phrases, and coding categories and "families" were established. After these coding categories were refined, a tentative taxonomy was constructed. This taxonomy was refined and revised, and a final taxonomy of coding categories was completed.

Each unit of data was cut from the transcribed notes and glued to a 5" by 8" index card. The cards were marked with a different colored pen to indicate where the unit of data originated and how it was gathered. This color coding system was used to aid the data triangulation process.

# References

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# CHAPTER 4: Successful Practices at Forest Hills School—A Collective Response in Meeting the Individual Needs of Gifted and Talented Students

Jann H. Leppien, Ph.D.

## Introduction

How do classroom teachers provide an atmosphere that recognizes individual differences? How do classroom teachers structure opportunities for these students to pursue advanced topics more applicable to their learning needs? This chapter reports the results of a comprehensive study of two elementary teachers and their perceptions, beliefs, and practices regarding differentiating services for gifted and talented students. The findings reported in this chapter are the product of historical data, classroom observations, and interviews with classroom teachers, specialists, students, and administrators.

In the following section, a description of the setting provides the reader with vivid details of the town and school sites. The next section focuses on the informants who shared an understanding of differentiated support services to gifted and talented students at Forest Hills School. Then, the findings of this study from the perspective of the specialists, administrators, and teachers are presented. The following section addresses recurring themes that help to explain theoretically these differentiated practices. The chapter closes with a summary statement and a discussion of the methodology.

## Setting

### The Community of Forest Hills

Nestled in the northeastern highlands of New England, Forest Hills now is a shell of the once-bustling factory town that existed in the early 1800s. At its height, this industrial community boasted the existence of thread mills, cotton mills, silk factories, comb factories, and a glassworks. Tenement dwellings and boarding facilities for the workers and their families once lined the streets. Remnants of Victorian-styled buildings symbolize the earlier wealth and power of this community and provide a historical perspective to visitors who travel through the area.

Although all of the old industries have vanished, the town's population has grown in the twentieth century as an increasing number of residents have decided to live there and commute to work in nearby towns. The town has managed to avoid the desecration of its scenic landscape and the establishment of fast-food restaurants and malls that have typified other suburban areas. Instead, conscientious efforts have preserved the town's architectural landmarks through modifications of existing structures into residences and businesses.

The community has been classified as an emerging suburban area with a population of nearly 6,000 people. It is located 35 miles from the nearest urban city and relies heavily upon its residential property to support municipal expenditures. The 1990 Census reports have recorded Forest Hills' population by race as 96.9% Caucasian, 1.4% Hispanic, 1%

Black, .3% American Indian, and 1.6% Asian. The median housing value in 1990 was $161,800, while the median family income salary was $22,762. This compares with the state's housing average of $130,000, and a family income salary of $51,000. In 1991, 4.8% of the families in the community fell below poverty level.

Unemployment in Forest Hills has hovered in the 5% to 6% range, compared to the state's average of 5.1%. Of those who work, 18% are in retail sales; 17% in education; 8% are in finance, insurance or real estate; 6% in health-related fields; 4% in public administration; 2% in agriculture; and the remainder in a variety of jobs and professions. Of the community members, 25 years or older, 75% had high school diplomas and 26% had college degrees. Presently, Forest Hills relies on its principal industries of agriculture, manufactured machine parts, and electroplating.

Despite the town's small size, Forest Hills has many voluntary organizations. Its local PTA, founded in 1947, has been an active association and publishes a newsletter for the community to inform them of school activities. Each resident receives this newsletter, which features articles about faculty members, school events, curriculum developments, and Board of Education reports. Other community organizations host community fundraisers which support school projects, such as high school scholarships and library book purchases.

## Forest Hills School

Originally, the town supported 11 school districts. The era of one-room district schools continued until 1923, when the construction of Forest Hills School was completed. This school has continued to service the fourth-eighth graders of the community while Edwin Elementary School has served the K-third graders. In the past, the district's 9-12th graders had a choice of two regional high schools located in nearby towns or a vocational school for their secondary education. The district paid tuition costs for these students to attend out-of district high schools. As of 1990, however, Bellington Regional High School is the only designated high school for eighth grade students.

Forest Hills School was built on 9.5 acres of land that the town received from benefactors with the stipulation that it revert back to a family foundation if it ever ceased to be used as a school. Over the years, renovations to the once symmetrically-shaped building have accommodated increased school enrollments. Two white columns embrace the entrance of this brown brick school; to its right is an attractive sign informing the public of the hours that the school library is open for community use.

During the 1991-1992 school year, Forest Hills School served approximately 320 middle school students. Also, in the same district, 300 students attended Edwin Elementary School, and 220 students attended out-of district high schools. Of the children attending Forest Hills School and Edwin Elementary School, approximately 98.2% of the students were Caucasian and 1.8% were of Asian, Black or Hispanic origins. Of these children, 35% qualified for free or reduced lunch plans.

The district employed 4 administrative staff personnel, 45.4 classroom teachers, and 3 support staff to serve the needs of the K-8 students. Since 1990, the district has become a Professional Development Center in collaboration with a nearby university and has aided in the training of future teachers. In return, the school has received staff development resources from the university.

At the Forest Hills School, the superintendent's office was located directly across from the principal's office. Approximately 21 classroom teachers occupied rooms on two

levels. The sixth-eighth grades were on the lower level, and the fourth and fifth grades shared the main level. Three teachers per grade level taught in the fourth and fifth grades, and 14 teachers served as a sixth, seventh, and eighth grade team. In the fourth and fifth grades, classroom size averaged between 18 and 20 students. In addition, numerous support staff assisted classroom teachers. These are specialists such as a math coordinator, music instructor, physical education instructor, computer specialist, art specialist, language arts/reading coordinator, guidance and social worker, special education staff, and the gifted and talented coordinator. Most teachers had Master's degrees and had been employed in the district for an average of 11 years.

Inside the school, the long hallways opened to classrooms on either side of the corridor. The walls were freshly decorated with student art work. Several of the students from the art department had created murals on the wall depicting the ocean life that had been studied in science class. In the foyer, a large bulletin board displayed newspaper clippings that described the "happenings" in the school. One piece discussed the new music curriculum that included the use of a Macintosh computer, electronic keyboards, and headphones to enhance music skills. The article explained,

> . . . by combining the keyboards with the Macintosh computer, teachers are able to gain previously unavailable data on the students' achievement and their understanding of the lessons. The software allows students to learn at their own pace while participating in a class.

In addition, Forest Hills School prided itself on being a technology-enriched environment. In a central lab, 20 Apple GS computers were available to the students, and two additional computers were placed in each classroom. Students also received library catalog data base instruction and learned to access resource materials through computers.

## The Classrooms

The two classrooms, where I spent most of my time, were similar in construction yet different in room arrangement. Both had adequate lighting and large windows that allowed daylight to filter in. The higher level thinking posters on the walls and bulletin boards reminded students of processes used to make decisions, produce new ideas, predict cause and effect, execute planning, and develop written and oral communication. Other wall charts suggested strategies to solve mathematical problems, such as working backwards, drawing a picture, or designing a chart.

Shelves bulged with science kits and math resources, and closets were filled with novels that were shared among the grade levels. The arrangement of the teachers' desks permitted students to seek assistance easily. One or two computers were available for student use; a telephone had been placed in each of the classrooms for the teachers' use.

The classrooms differed in the respective styles that each educator brought to the environment. For example, the students' seating arrangement in the fifth grade classroom varied according to the instructional strategy used to deliver the lesson. On some days desks were arranged in rows to facilitate whole group instruction; on other days they were grouped together in fours to promote collaborative work. A large table was located in the back of the room where teams of students worked together. A bookcase in the front of the room displayed a variety of reading material.

In the fourth grade classroom, the students' desks were scattered throughout the classroom. Some were located behind cardboard barriers, and others pushed against bright-yellow room dividers. Behind the dividers, various learning centers were arranged

for student use. A science center housed shoe boxes filled with an assortment of science equipment, such as prisms, nails, batteries, and bulbs. Mystery boxes lined the shelves with intriguing messages written on the outside lids, "What's inside me? Do not open me! Shake me, turn me different ways, slide me around, and use your senses! What's your guess?" To the left of this learning center, laminated language arts activity task cards encouraged students to write endings for unfinished stories. Located on the front wall were mathematical extension worksheets used by students during their free time. An enriched assortment of reading materials was displayed in bookshelves directly built onto the surface of the back wall.

## The Staff at Forest Hills

### Classroom Teachers

Sarah Jacobs has taught for 15 years at Forest Hills School—11 years in fifth grade and the other years in kindergarten and fourth grade. She has a Bachelor's degree in elementary education and a Master's degree in reading.

Sarah continues to grow professionally by attending workshops in the region. Last summer, she participated in a training session on integrating historical research into the curriculum. The district financially supported this professional development experience. In addition, she has received training by the district in developmental math, process writing, critical and creative thinking skills, and literature-based reading instruction. Outside the district, she has attended Atomic Math Workshops on integrating problem-solving strategies and exploratory math methods into the curriculum; state-wide training of the drug abuse program used by the district; state training that has certified her to work with student teachers; and workshops to develop literature-based reading materials.

Sarah's work day began at 7:15 a.m.; she left between 4:00 and 5:00 p.m. If she chaperoned a basketball game, this schedule extended to 7:00 p.m. This year, she mentored a student teacher, so additional time was spent meeting with the university supervisors:

> Tonight, my student teacher and I have a meeting, and it will last until 6:00 p.m. If we are finished with tomorrow's things, then we will go home, but we may come back if necessary. It's a long day sometimes. It's longer than the people who say you only work 9:00 to 3:00. They don't know the half of it. The student teacher doesn't either, but she will.

Tim Kern has been a fourth grade teacher in the Forest Hills School for 20 years. He has a Bachelor's and Master's degree in elementary education and has been working on his Sixth Year degree in administration. His first student teaching experience was in a departmentalized sixth grade where he taught social studies and English. For his second student teaching experience, he taught language arts and reading to fifth and sixth graders. This assignment placed him with a teacher who had just returned from England, so he felt that his preservice training was indirectly influenced by her work with the British primary schools.

In addition, Tim attended workshops to keep informed of new teaching techniques. He stated that the district had provided teacher training in several areas which contributed to his education:

> I've taken tons of workshops. This includes workshops on questioning strategies, Madeline Hunter's design for effective instruction, developmental math, process writing, and whole language. We've been trained in *Talents Unlimited.* I am a member of the BEST program, which means I am a cooperating teacher and assessor of student teachers and can be a mentor for a beginning teacher.

Tim assumed the Forest Hills School's fourth grade position after completing college. He views the introduction of technology into the classroom to be the greatest change in education. For the most part, his philosophy of education and classroom organization has changed very little over the years:

> I am not merely the teacher. I am the facilitator for the students and a resource person for them. They're responsible for learning to become organized, to become independent learners, to become risk takers, and I facilitate all those things. I provide direct instruction to those who need it and in areas where the curriculum calls for it. I try to integrate everything through the course of the day.

### Math Coordinator

Linda Perkins has served the district as the math coordinator for the past seven years. Prior to this assignment, Linda was a second grade teacher at the elementary school in the district. Her coordinating position is that of a non-administrative teacher who provides support services to the students and teachers.

The mathematics curriculum focused on problem-solving, conceptual understanding, mathematical reasoning, and communication. The program emphasized learning mathematics through exploring, conjecturing, and thinking. With this child-centered and activity-based program, students were involved in discussions to strengthen and justify their mathematical understandings. Problem solving topics, such as data analysis, and spatial and numerical reasoning activities, were practiced by the students. Other goals of the mathematics program were centered around meeting the needs of individual students, and teaching to the intent of the *National Council of Teachers of Mathematics Curriculum and Evaluation Standards for Mathematics Instruction.*

### Language Arts/Reading Coordinator

Candice Benson has had a long tenure as a teacher in the district. She has taught for approximately 16 years in a variety of teaching positions ranging from third to fifth grade. Nine years ago, Candice participated in a state-wide writing project which eventually lead to the creation of her current position. As the district moved toward the adoption of a formal program to teach students process writing, they looked to Candice for direction and guidance. As a result, she was assigned the language arts coordinator position on a half-time basis while she worked as an independent writing consultant outside the district. After the district's reading coordinator took a maternity leave, Candice assumed the duties of that position and became the language arts /reading coordinator on a full-time basis. As the district adopted a whole-language approach and integrated reading with language arts (i.e., speaking, listening, writing), they hired an additional reading coordinator who serviced grades K-8.

### Gifted and Talented Coordinator

Pam Clark taught seventh and eighth grade geography and social studies for three years prior to moving to Forest Hills School. As she had no prior training in the field of gifted and talented education, Pam attended workshops on thinking skills and other training

programs. Eventually, she completed her Master's degree with an emphasis in gifted education. She has taught in this position for five years.

Pam has been an active member in the state gifted and talented association. She has presented numerous workshops at these annual conferences, and at state-wide middle school conferences. Pam has become a national certified trainer for the thinking skills program, *Talents Unlimited.* She has offered this training to the teachers of Forest Hills School and has co-authored a chapter about this program for a textbook.

Her professional leadership qualities are shared frequently with the teachers and students of the school. She has served as the chair of the Forest Hills School Building Staff Development Team. In addition, she has arranged regional competitive meets for students participating in problem solving programs and debate.

Pam's role in the school is varied: full-time teacher to students who receive enrichment services; consultant to the staff as they infuse thinking skills and differentiated practices into the curriculum; school liaison to community groups, such as Senior Citizens and the PTA; and curriculum enrichment specialist who locates human and curriculum resources to extend and integrate into the regular classroom curriculum.

### The Superintendent and Principal

Sam Flynn has been the superintendent of the district for four years. He has worked with the district to refine curricular programs that have moved away from the sole reliance of textbooks and adopted materials and strategies that reflect current educational philosophies and recommendations. Since September of 1988, the district has written five new curricula spanning nine subject areas. The language arts curriculum has integrated the subjects of reading, writing, language, and spelling with the focus on the literature-based reading and the writing process. The district has developed a computer curriculum that only a few districts in the state have accomplished. The health/safety curriculum has received a commendation from the state and will serve as a model for other districts. The science curriculum has emphasized teaching the scientific method and has included more opportunities for hands-on experiences. The music curriculum includes a content strand and a music technology component.

Sam described himself as approachable and open-minded and has a positive attitude when it comes to change and innovation. He stated that the leadership from the teachers, coordinators, specialists, and administrators is of the highest caliber and "even though they are of this caliber, everyone still wants to grow. They are never satisfied."

Craig Heintz has been the principal of Forest Hills School for 11 years. Prior to assuming the responsibilities for this building, he was a principal in a junior high school and a high school social studies and English teacher. Craig's primary responsibility at Forest Hills School was to oversee the implementation of the curriculum and to monitor school atmosphere through discipline and positive intervention programs.

### A Student

Mindy Sullivan has received services from the gifted and talented program for two years. As a fifth grader, she has participated in a program called *Future Problem Solving.* This program has taught the students how to apply problem solving processes to scientific and social problems of the future. In addition, Mindy has participated in several writing workshops. She has written a book and submitted her writing for publication in the school literary magazine.

# Findings

## Impact of the Gifted Education Program and Specialists' Services

This section will detail how the gifted and talented coordinator, and the math and language arts/reading coordinators had a direct impact on the differentiated services the students received. Their work and the role they served in the school setting emerged as important factors that contributed in the design of a comprehensive effort to meet the unique needs of individual students.

### System-wide Identification and Programming Efforts

Forest Hills School's academic enrichment program was designed to provide process skills training and enrichment within both the regular classroom and in a resource room setting. There were numerous efforts to include the staff, parents, and students in locating talent and understanding the goals of the program. Each spring, teachers nominated students to participate in the program. In addition, some students were identified through academic tests. This procedure was initiated by Pam who sent out a letter to all teachers. It stressed the following: "Your insight into student performance is very important for the identification process. Please consider students who have strengths and talents in content areas and note their strengths on the form."

Tim, a fourth grade teacher, addressed the importance of having an identification system that involved others in the search for school talent:

> In the past, the selection process was very stringent as to whom was accepted to receive services and now it is a more widely open process with teachers, parents, and students having the opportunity to nominate students.

In addition, Tim felt that this system better identified those students who were talented in other areas such as music, art, and drama. He believed that this flexible identification system allowed "students to revolve in and out of the program depending on their interests and to participate in the services at a level based on their own motivation."

The teachers were assisted in identifying these students each fall when Pam went into the fourth grade classrooms to teach a unit on multiculturalism. She taught in each fourth grade once a week for 16 weeks. The unit focused on the importance of individual strengths and differences and infused critical and creative thinking skills into the lessons. As Pam explained, "This gives me an opportunity to meet the students and work with them. It also allows the classroom teacher and myself time to identify those fourth graders who need services."

A similar strategy was used to identify students for a Math Club that provided enrichment classes to those who needed advanced or enriched mathematical opportunities. Linda stated, " The selection criteria is done with the grade level teams. As the math coordinator, I will go into the classroom and do a whole group activity. Together, the teachers and I can identify the students who need this service."

Additional teacher involvement was encouraged as Pam notified teachers of the upcoming enrichment events and sought their assistance in identifying students in their classrooms that might benefit from the experience.

The community was also included in this school-wide effort to understand and support the academic enrichment program. Each fall, Pam would invite the parents to an open house. She discussed the purpose of the program and identification procedures. Pam also explained the types of enrichment opportunities available to students and how parents could support such activities.

In the fall, classroom orientation sessions were scheduled to inform the students of the academic enrichment program. Students were asked to complete an interest assessment to ascertain topic areas that they would be interested in exploring. These topics were used to develop a one year plan for schoolwide enrichment activities and to identify students who might benefit from workshops. A similar survey was used with the staff and community members to inventory areas of interest and special talents that they were willing to share with the students of Forest Hills School.

## Coordinators and Teachers Collaborate

Differentiated services were provided to gifted and talented students through the collaborated efforts between and among the coordinators and the classroom teachers. With regard to the selection of differentiated materials, units of instruction, and teaching strategies, the teachers and coordinators raised several questions: How well do these materials integrate into the curriculum? How well do they differentiate the curriculum for students? Are there scoring instruments or procedures that might help us recognize the strengths and weaknesses of students?

The coordinators worked with teachers in the classrooms to provide direct student services, model lessons for the teachers, or co-teach a particular unit. The coordinators pulled students out of the classrooms and provided enrichment opportunities or exchanged teaching positions with their colleagues to teach each other's classes. Sarah, a fifth grade teacher, described how the pull-out math class worked:

> Linda takes the students every other Friday and does math enrichment activities with the students. She works on activities that are far above and beyond what we are doing in the classroom, or at least widening and enriching activities.

One way to meet the needs of high ability math students was to offer these pull-out extension classes for selected students in grades 3, 4, and 5 on alternating weeks. As a service to the students and the teachers, Linda held these "Math Clubs" in the library; the students left during their regularly scheduled math time. Students were identified by the classroom teachers as needing this form of enrichment. Screening was held at the beginning of the year, and student participation was voluntary. In addition, students could be nominated anytime during the year.

As a way to increase the use of extension activities in the classroom, Linda had conducted workshops for the teachers. Tim discussed the importance of this service:

> Linda will also work within the classroom with us on model forming. If I want some extensions in math lessons that I think are appropriate, she will plan and model them for me and get materials that are necessary.

Tim believed that the collaborative services provided by Pam, Candice, and Linda helped him to individualize the curriculum for high ability students:

> In reading, Candice will come into the classroom and work with small groups of students. She will also model for me, help me plan, and access materials that I

might need or the students might need. Pam offers enrichment programs that are based on the interests of the students and they will often leave the classroom to receive this service.

Candice stated that this modeling often takes the form of co-teaching, " I might co-teach with the teachers. The teacher would be teaching one novel, and I would be teaching another in the room so that she is not watching me all the time, just some of the time. This seems to work out really well."

Some of the students in the fourth grade had benefited from a collaborative service initiated by Pam and a social studies teacher. This program, called "Trading Places," was another way for teachers to provide differentiated instruction to students. Pam described the program:

> I have worked with the staff to trade places with them. They teach my students something that is usually in their strength area, and I teach in their room. For example, I exchanged places with the social studies teacher for six weeks. He taught the identified fourth graders a unit on the microscope while I taught a unit on conflict resolution in his eighth grade class.

The collaboration between and among the coordinators was viewed as another way differentiated services for talented students was accomplished. The coordinators were familiar with the types of services that each coordinator facilitated, and they worked together to integrate and support those services to better meet the individual needs of the students of Forest Hills School. Linda indicated this when she said:

> I work with Pam, and she will brainstorm some things with me. She asks me how she can apply advanced math strategies into student investigations. Whether the students are doing surveys or collecting data, Pam has the students directly apply the mathematical skills. I might work with Pam to develop an enrichment unit for the teachers, or together we will work with classroom teachers to bring services to high ability students in the math classes.

Also, Pam worked very closely with the school social worker to insure that students who are at-risk for failure are not excluded from enrichment activities. "Based upon their personal interests and strengths, I include these students whenever possible in small group activities." The guidance counselor worked with Pam by chaperoning enrichment events that took place at the university or other out-of-district locations.

Through the collaboration of services, coordinators and teachers were able to work with students and improve academic performance. Candice believed that this collaboration eliminated the fear often felt by teachers when a student's basic curriculum is modified. She explained a technique called curriculum compacting which helped the staff streamline curriculum for students. The procedure identifies the curriculum content and skills to be modified or eliminated after students have demonstrated mastery. Other enrichment activities are planned for the students based on their interests or as extensions to the curriculum. Candice explained how curriculum compacting might be accomplished by the team:

> Pam and I will often sit down with a classroom teacher when they plan curriculum compacting, because it validates the process if I sit down and give input. It becomes a shared process. Pam fills out the recording sheet documenting this process, and the teacher or I will do the pretesting to determine what the child already knows.

Candice explained also how the students benefited from this process:

> Last year we had a fifth grade student who had been nominated to the gifted and talented program. The classroom teacher and I recognized that this student had difficulties in writing, and Pam recognized that the student had an area of interest in fashion design. I took the student out for services in writing, the teacher worked with her in the classroom, and Pam worked with her to improve her writing during a research investigation on fashion design. So we all worked together. The beauty is that we were all in it together. The student ended up receiving the highest writing score on a writing assessment that was given by the classroom teacher. The joint effort worked.

Group decisions by the staff and specialists initiated curriculum changes for the students. These decisions had an effect on the selection of materials that were used with gifted and talented students and determined how enrichment extensions would be selected. Craig, the principal, stated:

> What Pam does well is that she makes the program complement the curriculum. She makes a point of talking to the teachers, so that she provides an integration. That is the strength that she brings to the program.

Candice discussed the importance of the role Pam played in integrating her services into the school. "She works with Linda and myself if we have math or reading kids we are concerned about. She is right in there with a suggestion about how to form a group, compact this, or how to change the curriculum for a student."

Group decisions between classroom teachers and coordinators also initiated changes to the reading curriculum. Discussions between and among staff members facilitated the decision to move toward the development of a literature-based reading program. This program was viewed as a way to differentiate the curriculum for all students. Candice explained:

> We sat down with groups of teachers and said, "What is not working? What can we do to improve reading instruction for the students?" We had to look at our materials and how we were teaching. We looked at how we can make things better and began to look at the time that we were spending reading versus how much time we were doing workbook pages. We began talking about having students spend more time reading and doing more writing. A fourth grade teacher suggested, "If we want kids to do more thinking, we are going to have to give them real things to read because they can't think about these stories. There is nothing to think about." So we began talking about using literature.

This dialogue lead to the purchase of novels which replaced the reading textbooks in their classrooms. Candice added, "The teachers jumped right in and began to use these materials, and once they did this, the work that the teachers did to create materials to supplement the novel and skills instruction was incredible."

### Interest-based Enrichment Opportunities

Enrichment opportunities were offered to the students of Forest Hills School in a variety of formats: school-wide events, small group minicourses, individual investigations, classroom field trips, and presentations. The school-wide events were arranged by a committee of teachers that was chaired by Pam, the G/T coordinator. Classroom presentations and field trips were arranged by Pam and the teachers to

complement the regular curriculum. Individual or small group investigations, or workshops were provided for gifted and talented students and other students who were invited to attend based on their interests. Most of these activities were directed by Pam.

Mindy and other students in her classroom participated in "Career Day" that had been arranged for the whole school as a way to explore a variety of career options. Mindy's fifth grade class attended a presentation made by a nuclear physicist, a finalist in the "Teacher in Space Program." Also, the class visited the school cafeteria where presenters displayed information about their careers and talked with students about the types of skills used in their professions. These displays covered 38 different career options.

Other grade level presentations had been arranged throughout the year. In conjunction with the multicultural unit," Celebrating our Differences," Pam had arranged for a director from a local disabilities center to make a presentation to the fourth graders. A field trip for the fourth grade students had been arranged to the university museum. Here they had a shark display and native American exhibit that would complement a fourth grade curriculum study on adaptations. Pam also arranged for a docent to visit the school and discuss the terms and concepts that would enhance the students' viewing of the museum's exhibits.

In addition, Pam taught small group and large group minicourses to students who had interests in particular topics. For example, an oral speaking class called "Poetry in Motion" was offered to students interested in reading and writing poetry for a storytelling conference. Eleven fifth graders had been invited to attend this conference where they would perform their work and view performances by professional artists and other students. At this event, Pam would often locate other storytellers that she would invite for school presentations. In addition to this class, Pam taught a writer's workshop to a group of fifth grade students and arranged a class in microbiology for some interested fourth graders.

When I asked Pam about the money to sponsor such activities, she said that many people volunteer. For the activities that require a fee, fund raisers are held. Also, a foundation in town has a grant program that supports projects like Career Day. Pam actively searches for money to supplement student workshops and school programs.

Mindy also spoke of the enrichment events in which she participated. She was usually pulled out during reading and math classes because these were her strength areas. She said that she attended Math Club, taught by Mrs. Perkins, every other week. In this class, they were trying to identify the pattern for the relationship between the number of angles and the sum of the degrees in a polygon. In addition to this instruction, Mindy was working on several other projects with Pam. She described some of her work by stating:

> I'm doing Logowriter. It's a computer program that allows you to write other computer programs. I'm pretty good at math, and I come during math class. I'm also involved with Future Problem Solving. I work with a team and solve problems. This year's problems deal with space exploration, equal opportunity, and sports ethics. The State problem will be land use.

Pam explained that this problem solving program was a year long program in which teams of four students use a six-step problem-solving process to solve complex scientific and social problems of the future. These solutions were submitted to an outside evaluation, and the evaluators made suggestions to improve the teams proficiency at problem-solving.

Mindy's team was preparing for the state competition after receiving news that their team had come in first place during the qualifying rounds.

Individual investigations were also being conducted by two fourth grade students with the assistance of a university student who guided their development. Pam arranged this mentorship and would meet with the students and the mentor to discuss their progress.

Schedules were arranged for those students who were identified for the gifted and talented program. The teachers released the students for two, 40 minute time blocks each week. Students who were identified for the Math Club attended on a voluntary basis on alternate weeks for an additional block of time. Classroom and schoolwide events were scheduled with respect to the staff's schedules.

Students in the program were taught to initiate the process of curriculum compacting. They checked with their teachers to see if classroom assignments could be compacted so that they had more time to work on independent studies or small group investigations. The procedure for this practice varied; sometimes the students were allowed to move at a faster pace, and at other times the students were required to complete the work at home.

### Availability of Classroom Support Materials

Support materials were available to the teachers for use in their classrooms. A math resource library, located in Linda's office, contained support materials on topics such as problem-solving, organizing data, deductive and inductive reasoning, and geometric investigations. Linda used these materials, "to take examples to classroom teachers. When I am working with high ability math students, I always take materials at the next higher level than what is recommended by the publisher."

Pam also sent resource materials to classroom teachers. On one of my visits, Arbor Day information had been sent to the fifth grade team. Although there was not enough time to implement the suggestions, the team agreed to inform the students of an upcoming poster contest. Students received a flyer indicating the purpose and rules of the contest.

### Advocacy for Differentiated Practices

Pam believed that understanding of differentiated curriculum required time and patience. She viewed her role as one who could help provide these differentiated services by arranging enrichment opportunities and working individually with the students.

Candice suggested that teachers are often less comfortable with knowing how to provide differentiated services. The support staff could help teachers identify the students who may need something different to meet their individual needs. She shared this experience:

> I was working with a teacher who was new to a particular grade level. The teacher gave me a group of students to work with in the classroom, so I could co-teach a unit. One student was extremely bright, and I felt she didn't belong in this group. The teacher believed that the child could provide a good role model for the other students. This wasn't my idea of what this child should be doing. The student didn't provide this model, because she was quiet and never shared with anyone. For this student, I was able to recommend that she be grouped with three other students of similar ability. They could cover the material in half the time and do

more extended projects. I think it takes people, like the support staff to suggest that these students need something else.

Linda said, "I have felt the need for some of the students to have enrichment. This is why we developed the Math Club." She felt that there was a strong need for better on-the-spot diagnostic assessment of students when teaching mathematics. Even with an emphasis on using hands-on materials to help students build concept models, she felt a need still existed for the recognition of students who are ready to move past this building stage. She explained how diagnostic assessment should be used:

> When skills are being taught to students conceptually, they do need to be working with materials and developing concepts, but there are some children who grasp those concepts quickly. They are thinking on a different level. The concept building happens faster, and they are ready to move on. We need to arrange the classrooms so that some groups can continue this concept building and extend some of these kids on to higher levels of thinking or abstract levels. I believe that we can have different levels of instruction. This is an issue that I am constantly pushing.

**Working With the Teams**

Pam, Linda, and Candice conducted formal and informal staff development training opportunities. Linda's role consisted of making refinements in the math curriculum assigned to the grade levels. In addition, she facilitated school-wide inservices in math training, provided model lessons in the classrooms, and worked with grade level teams to implement the math program. Ongoing support was provided to all teachers as requested or as directed by an administrator:

> I think of myself as part of each of the teams, and if we can come up with a situation that we want to explore, then as a team we can better deal with it than a district-wide or school-wide inservice. We have professional time on Wednesdays, two hours, where the children go home an hour early and teachers are contracted to stay an hour later. Two of those Wednesdays during the month are district time, so the system can direct what is going to happen. The other two of these are grade level team time. Depending on where the interest comes from, the teams can arrange for me to attend these sessions and explore topics and ideas with them.

Concerning her coordinator's position, Linda said:

> Obviously, we have to draw on the curriculum and sometimes point out situations or raise a question that might make a teacher anxious. I think, though, in the overall picture, they still see it as a supportive position. It's often easy to lose sight of this.

Candice's services were similar to Linda's. She explained how she conducted informal staff development:

> I usually don't work directly with students. I work with teachers. The position was set up as a staff development position. Occasionally, I work with students if there is a special case. I can't give advice unless I work with the child for two or three months. A big part of what I do now is modeling for the teachers. Initially, I would go into the classroom and do one or two lessons and then leave. Now I go in for a month or six weeks and teach a whole novel. The teacher would be teaching one novel, and I would be teaching another in the room so that she is not watching me all the time, just some of the time. This seems to work out really well.

> I will sit down and dialogue with the teacher the whole time this is happening. At the end, we would have an exit conference. We talk about the things I was trying to model, the strategies that worked, the things that didn't work, and how I adjusted instruction.

Candice voiced her frustrations to me as the district considered eliminating one of the coordinating positions due to budgetary cuts. She stated:

> We have just completed our language arts program evaluation, and we know what has to be done in the district. . . . Everyone has put so much time and effort into the program, especially in math. We are getting into the extension pieces now. The teachers know the curriculum well enough on a basic level. Now it is time to differentiate. It is time to design other activities, and now the teachers won't have someone to help them.

Pam conducted teacher overview sessions about the academic enrichment model in the district. She has presented compacting workshops and has trained most of the staff in the thinking skills program, *Talents Unlimited*. Pam provided informal staff development by working with particular grade levels during team time and with individual teachers upon request. She also taught curriculum units with classroom teachers, initiated curriculum compacting for students who are going to be serviced by the program, and attended the curriculum meetings.

### Community Involvement

Pam involved the community by searching for people willing to share their talents with the students. She sent out letters to access community involvement, attended Senior Citizen's events to discuss future projects that would involve their help, and worked closely with the PTA to organize enrichment events for the school. One such event was forthcoming and would celebrate multicultural differences. Students who participated in the Storyteller's Conference would share their stories, and classroom teachers were invited to have their students display classroom projects. Pam also hosted an evening performance called "Product Fair" where the students presented their plays, poetry, research, and projects to their families.

## Classroom Factors That Influence the Use of Differentiated Practices

This section outlines categories which were observed in the fourth and fifth grade classrooms on a regular basis and influenced the use of differentiated practices for students. While the two classrooms were different in terms of grade level and organizational frameworks, they shared a set of common beliefs and attitudes toward providing differentiated services for students who demonstrated advanced abilities in certain content areas. These common beliefs contributed to the understanding of the underlying pedagogical structure from which the teachers' material selection and practices were based.

### Classroom Atmosphere

Classroom environments which promoted inquiry and an exchange of ideas among the students were observed in both classrooms. In reading class, students were encouraged to seek clarifications of teacher-written questions and to consider the levels of teachers' questions. In the fourth grade, Tim would ask, "Was this question literal, interpretive, or evaluative? How will this influence the way you record your response?" Thought-provoking, student-directed discussions occurred in the reading and math classes as the teachers guided these exchanges. During one observation in Tim's classroom, he

engaged the students in a reading dialogue to determine if the students felt that the main character had been accepted by the group he lived with. The students shared their responses and quoted passages from the book to support their responses. Following this exchange, Tim shared some thoughts about this practice:

> The literature-based program that we use requires open-ended discussions and lots of sharing of ideas and opinions in a non-threatening situation. I'm not looking for one single answer, but trying to get the students to be risk-takers and understand that there are many different solutions, answers, outcomes, and inferences that can be made about something. These answers are dependent upon the student's own life experiences. They should have the right to voice those opinions and share them.

Sarah involved the fifth grade students in a variety of math inquiries that had them determine what type of rule or mathematical formula to follow. For example, she would write on the board:

| Input | Output | It's not |
|---|---|---|
| If E = 5 | F = 29 | 30 |
| If E = 9 | F = 53 | 54 |

Students constructed rules or formulas that would solve this problem, and Sarah recorded them on the board.

Rules: $(E * 6) - 1 = F$

$$\frac{(F + 1)}{6} = E$$

After some discussion, another student suggested:

$$(E * 5) + (E - 1) = F$$

Sarah recorded this response, paused, and looked perplexed. Then she smiled, turned to this student and said, "You know, you are absolutely correct. I was thinking of only one right answer. That's bad for me. You are right! Let's try that rule out on other examples."

Tim believed that gifted and talented students were capable of understanding so much more. "I try to give the students something new each day. If the book suggests six examples, I give twenty." Sarah and Tim both believed in providing students with numerous ways or strategies for solving mathematical problems. Students were encouraged to explain how they arrived at their solutions. Student questions were often followed by teacher questions to promote the student's thinking about their own thinking.

These teachers referred to the services that students received as opposed to the labeling of the student. When identified students left the classroom for the academic enrichment program, Sarah would say, "Future Problem Solvers, it's time for you to go to class." Labeling the service as opposed to the students was a practice that the teachers and coordinators employed.

As classroom teachers, Sarah and Tim recognized individual differences and agreed that students needed additional services to facilitate their development. Sarah couldn't meet

all the students' individual needs herself; Tim depended on the coordinators to help him meet the needs of individual students.

### Utilizing Outside Resources

Sarah and Tim used many resources to support enrichment activities and curriculum in the classroom. When I asked Sarah if she used the services provided by the coordinators and specialists, she replied, "I have to. I can't do it all here, that's for sure." She explained that when the school started using the new language and math curriculum, the coordinators provided training and modeled lessons. They also helped with the testing and provided analyses of student strengths and weaknesses. The coordinators suggested how to modify particular areas of instruction to help students learn concepts.

Sarah believed in collaborating with her fifth grade team. She used the materials developed by her colleagues to support the math and reading curricula and stressed the importance of this team effort. "We have a real strong team, and we share everything. Everything that we make is placed in a central file. Even though the creating of math materials was a lot of work, it was only one-third or one-fourth the amount of work that it could have been."

Tim and Sarah used parent volunteers to help them in their classrooms. Sarah had a parent who helped her every other week with a computer tournament. The parent volunteer in Tim's classroom came in on Fridays to read a variety of stories to the students. Tim had worked with this parent for many years. During one observation, the students clapped when she entered the room and moaned when it was time for her to leave. She was animated during her presentation and told the students that she enjoyed being with them. Tim explained that his parent volunteer has a "real passion for reading and constantly goes to the library to locate the books that she shares with the students." She will often call Tim during the week to discuss a new book.

### Personal Commitment and Initiative

Sarah and Tim constructed many of the materials used in their teaching. As Sarah explained:

> When we decided to make changes in the math curriculum, the staff attended a lot of workshops. We knew in the summer that the book we had selected would not be published until the following year, or maybe two. We were ready to start a new curriculum with no books, but we were sold on the new curriculum. We just loved it. We decided to use the curriculum anyway and made up our own support materials. We worked together as a team to create the materials.

She continued to explain what motivates her to spend the extra time creating support materials.

> The kids motivate me. What motivates me is looking at their needs, and what's good for them, and my belief in the curriculum. The choice at the time was you either take part of the summer and write some plans to teach with a novel, or you continue to teach with the basal. I believe in this literature-based program, and I believe in using novels. You can see when kids are interested in a book. They're eager to keep reading; they're excited about it, and they want to talk about the selections. They're not as interested in a basal reading book.

Tim had created his own reading and math materials. He showed me 40 student-directed reading packets that he used with the students. These packets were written after he read each book to determine the types of skills and questions that would be stressed. Also, he had created an individualized spelling program to differentiate spelling lists.

Tim was committed to working with artistically talented students in the seventh and eighth grades. During free periods and after school, Tim worked with these students. He explained the importance of this involvement:

> I work with some artistically gifted students that I think have the kind of talent that could get them into some very good art schools. Half of them are behavior problem students who are very low achievers in school, although they are highly intelligent students. They have no motivation to be in school. I am trying to key into their art ability to show them there are people who care about them in school. I want them to know that their art ability is equally as important as their academic ability. This might be the key to going on to school or keeping them in school. Then, I have been working with some students who are artistically talented and also academically high achievers.

Sarah and Tim actively pursued training that was provided by the district; they also attended summer classes held outside the district.

## Instructional Approaches That Differentiate Practices

Several instructional approaches were used in the regular classroom by the teachers to accommodate the diverse learning needs of their students. Descriptions of the grouping practices, instructional delivery systems, and curricular materials are included in the next section.

### Flexible Grouping Practices

Various grouping practices were observed in the classrooms. The teachers had the option of grouping the students in a variety of ways. Reading groups were flexible; sometimes the students were grouped by interest or reading ability, and other times the students were grouped so that the teacher could work on a particular skill that needed reinforcement. Alternative reading selections were offered to students when they had read a book chosen by the teacher. The class often read different books based on a theme.

Most math classes were taught in a whole-group fashion. Sarah and Tim used the pull-out enrichment classes offered by Linda to provide differentiated math activities. The students in Sarah's classroom also attended enrichment classes in Pam's class during math time. When differentiated math assignments were given, the students in Sarah's room would group themselves at the back table. The teachers would provide opportunities for the students to group themselves into problem-solving teams to solve math activities.

### Management of Groups

Several management strategies were used by the classroom teachers as they worked with different groups of students. During one math session, Sarah provided two different logic puzzles for the students; one puzzle was taken from a beginning level logic book and the other from an advanced grade level. The students who were assigned the advanced puzzle were sent to the back table to work on the assignment. They were told to return to the group after they finished. These students worked together and discussed possible solutions.

The way in which the students' reading materials were packaged often influenced how the teachers would instruct the students. These packets contained sheets of paper or ditto sheets that emphasized the vocabulary words and listed questions that the students would respond to after reading a selection. Sarah explained how the packets were used:

> There are two ways that I use the packets depending on whether the book that I have selected is taught with the entire group. In this case, I would meet with the students each day, and we would work on skill lessons centered around the book. While I'm working with this group, other students have different packets that are designed for an individual student. This packet has more self-paced activities. The students can follow the directions to accomplish their tasks. They might be asked to discuss certain questions in a group before or after they read the assigned pages, or they might be asked to respond to certain questions in their journals.

Sarah said that she would collect the self-paced packets every few days and read what the students had recorded. Comprehension checks were given throughout the book's reading to check the students' levels of understanding.

Tim used a strategy called "Chapter Chats" where students would pair up and discuss chapter questions or emotional reactions to certain events before writing about them in their response logs. Both teachers walked around the room, stopping to discuss reading events or mathematical solutions that the students were generating in their journals. Sarah would frequently sit at a student's desk while the students went to the board to discuss how they solved problems.

Individual student file folders documented the results of process writing assessments, comprehension scores, math periodic testing scores, and listed the novels that the student had read. Writing samples were also filed here, as well as teachers' recorded notes about certain skills that needed to be developed.

## Curriculum Organization

Several units of instruction were based on a theme and included reading, spelling, writing, language arts, and social studies. The fifth graders were working on a unit about the historical period of the early 1800s that was written by Sarah and a colleague. In this unit, the students' reading materials were diary entries written from people 150 years ago. Sarah read from the book, *Caught in the Act,* to increase the students' understanding of what life was like during this era. The students compared and contrasted their life with the book's characters. As a culminating activity, the students invited their families to a reconstructed village and acted as tour guides through buildings such as the old school and the general store. The students displayed their murals and research reports at the village so that their families could enjoy them.

Tim also tried to integrate the curriculum. For example, he chose to read *Robinson Crusoe* to read to the students during story time. I asked him why he selected this book. He told me that when the students were reading the novel, *The Sign of the Beaver*, the characters were teaching one another how to read by using *Robinson Crusoe*. Tim felt that reading the original classic would help the students understand the references being made in the novel.

The selection of reading materials was based on how well they connected to the unit theme or topic. For example, *My Brother Sam is Dead* was selected because it complemented the fifth grade history unit on the American Revolution. Sometimes several books by one author would be gathered together so the students could analyze them.

Tim organized his spelling program to accommodate individual differences. It was a student-generated individualized program that used misspelled words from the student's writings. He explained the program to me:

> I create individual word lists by placing a green dot above any misspelled words that I find in each student's writing. These words become their individual lists. Some students don't miss anything. For them I have challenge words above grade level. For those students who can spell these words, I will generate a list with them. Individual cards are made up for each child, and on Monday we will take a pretest. This test is given in pairs. The corrected test is turned back to the student; they recopy only those words they miss. If they don't miss any, then they are excused from the test. They will take the test only on the words they misspelled. This test is given individually at my desk. Since I have a master list of the student's word lists, I will record the percentage on the card and indicate which words are misspelled. I can add these words again to the student's list.

**Higher Order Thinking Skills**

In math class, the classroom teachers stressed the discovery of formulas, rules, and multiple strategies that could be used to solve a problem. Students were involved with activities that promoted higher level thinking. Students in Sarah's room played a game called "Who Has?" Individual cards were passed out to the students. The first player started the game and said, " I have two hours. Who has this in minutes?" Another student holding this card replied, "I do. Who has twice this amount?" The game continued until all cards had been read or someone didn't answer correctly. This game was timed; students tried to beat an existing time of 1 minute and 45 seconds. Sarah and her colleagues developed similar games as they strove to include more activity-oriented materials in their math curriculum. In addition, assignments required the students to apply strategies, such as guess and check, draw a picture, work backwards, or use logic to solve complex problems. Sarah's students would often record their responses in math journals, and discuss their solutions with each other by explaining their thinking on the board.

Variables, outliers, samples, and averages were discussed during a unit on probability. The students investigated the probability of selecting a red or blue crayon from a sack after twenty trials. Students discussed what might interfere with the experiment, what variables needed to be held constant, what happens to the probability when you increase the number of times you perform the experiment, and the impact of outliers.

Students constructed math worksheets that could be used by other students in their classroom. After math rules or formulas were discovered or invented, the teachers would ask students to apply these formulas using a new set of numbers.

During the reading assignments and discussions, teachers emphasized questions that were interpretive, inferential, and evaluative. The student learned what type of questions were being asked and what kind of thinking would be required to answer the questions. For example, when asked a literal question, students knew that the answer was in their reading assignment, and when the questions were evaluative, the students knew that they would be asked to express an opinion or make a decision.

In social studies, Tim had the students create their own islands to synthesize skills in science and social studies. The students made a map of the island and applied the map skills they had learned. They developed a road system and created a political and economic system for this island. This activity was extended into the language arts class as the students wrote a story about their fantasy island.

The language arts curriculum emphasized process writing. The fifth grade students were taught how to analyze and holistically score the writing samples. Sarah taught her students how to apply decision making criteria in analyzing each story for content.

### Student Materials

Students used a variety of materials throughout the day. In reading, they read diary entries, poetry, novels, and newspapers. Workbook pages were replaced with content journals that were used to complete work assignments or record information about various subjects. In reading class, journals were used as comprehension and response logs, and math journals were used to solve problems. Instructional materials, such as attribute blocks, tiles, and unifix blocks helped the students to build mathematical concepts.

### Skill Instruction

After reading a novel, the teachers determined which skills would be emphasized. Some of the stories were used to explore various points-of-view, while others might stress sequencing skills or characterization.

When students attended enrichment classes, Sarah and Tim modified their assignments or eliminated the work for those students. Sarah modified her math instruction by reviewing a particular skill or meeting with individual students. Tim explained that the students who leave his math class are strong math students, so they are excused from their work.

## School or Environmental Factors

The teachers identified several key features which enhanced the use of differentiated instruction in the classroom. These environmental factors contributed to the effectiveness of the curricular materials and techniques and are explored in the following section.

### Staff Development

The district's staff development plan consisted of three professional inservice days for teacher training. Two days were coordinated by the administration and the third day was planned by teachers. In addition, the students were released an hour early from school each Wednesday; the teachers were contracted to stay an additional hour on this day. Two Wednesdays were set aside for grade level meetings; on the other Wednesdays the district planned meetings to discuss curriculum or provide additional training sessions. During my visit, an additional eleven days were arranged in order to compile the language arts curriculum. When schedules could be arranged, each grade level had similar specialist times, (i.e., art, music). This arrangement permitted the fifth grade team to meet on Tuesdays for approximately an hour.

When a new curriculum was adopted, coordinators assisted with purchasing materials and scheduling staff development opportunities on this curriculum. In this district a new curriculum was implemented in two grade levels. After two or three years, the program was formally evaluated. Results of this evaluation directed future teacher training activities.

Sam Flynn, the superintendent, said that the district was committed to practices that differentiated the curriculum for students. He explained:

> We are encouraging classroom teachers to use integrated units and apply extension activities to their lessons. We're doing everything we can to help teachers understand differentiation and provide it in the classroom. The adoption of literature-based programs and other curricular changes are making a difference in meeting the needs of students.

In addition to curriculum work and staff development training, the district supported the practice of having the coordinators provide enrichment opportunities for students. This practice was demonstrated as the coordinators work in classrooms to model lessons, co-teach and plan units with the teachers, and pull students out of the classrooms for special classes.

### Administrative Support for the Gifted and Talented Program

Sam supported the gifted and talented program. He explained his involvement by stating:

> The basic involvement that I have with the program is that I support it, and that I relate the successes of that program to the Board of Education and the town groups. I try to keep them educated so that they will provide the resources for it to continue. I sit in on some of the training sessions, and I attend some of the school assemblies. I try to support the coordinator when Pam needs something. She sends me information so that I know what is happening in the program.

When talking about the enrichment program to community groups, Sam stresses the benefits of the program to all students. He continued:

> You know, I can get before a group of four members or a group of parents and sing someone's praises, but these words mean nothing unless the group and parents are actually seeing things happen with their children in a school setting. Things are happening here. There are enrichments that are school-wide that anyone can see is a tremendous benefit to all students in the school, and if that didn't happen, the program would already have been gone.

### Coordinator Positions

The district hired coordinators to work with the staff, provide assistance to the students, and serve as curriculum specialists. Their roles were numerous as they planned staff development programs, developed curriculum, taught students, and administered and assessed student performance on state and national tests. The district hired Pam full-time to coordinate a gifted and talented program for the fourth-eighth graders. Her position was to work with identified students, plan enrichment opportunities for the school or classrooms, and provide a service to the staff by team-teaching units. She also arranged staff development training.

## Themes

The preceding sections emphasized descriptions, practices and perceptions from the key players involved in differentiating the curriculum for high ability students. In this section, I will discuss seven themes which emerged from the data. The themes are based on an analysis of the findings and interactions with the key players at Forest Hills School.

## Recognition of Individual Differences

Forest Hills School recognized the individual differences among the students they served and addressed these differences through curriculum materials, curricular strategies, and support services. Initially, these differences were brought to the teachers' attention by looking at the school assessments. These assessments revealed that some of the students had mastered the curricular material already. Both classroom teachers believed that these students needed some form of differentiation. Realizing they couldn't provide this differentiation on a daily basis, they depended on the support offered by the content coordinators. Thus, differentiated services to students became a collective response rather than an individual effort.

The Forest Hills teachers did not need to shoulder classroom burdens by themselves. Together, the coordinators and teachers provided more substantial services to the students. The classroom teacher made modifications to class assignments by adjusting the content, eliminating the assignment, or scheduling a specific time when the student could work on an in-depth investigation with the gifted and talented teacher. In addition, when the math coordinator and teachers identified a group of students who would benefit from an acceleration of a particular area of math, arrangements were made to have these students work together with peers from other grades during a scheduled time period. These arrangements occurred because the staff recognized the need for integration of services. Through their collective efforts, they could more effectively meet the needs of these students.

## Modification to Curricular Materials

The Forest Hills staff investigated ways in which the curriculum could be modified to meet the individual needs of the students. Reading was the first curricular area that received this type of scrutiny. The staff began to question the use of a basal text for all students and wondered how they might modify these instructional materials to improve students' academic performance. As a result of discussions with the reading coordinator, a staff member suggested that if they had a better selection of reading materials, perhaps students would be more interested in the stories. Thus, a variety of novels were purchased for instruction at each grade level. Teachers selected novels that complemented their curriculum, contained a variety of reading levels, and focused on a particular theme. During the classroom observations, it was not uncommon to see students reading from a variety of novels that focused on a theme, yet varied in readability.

There was also an emphasis on staff development. The teachers were trained to write curriculum, infusing the grade level curricular objectives and higher level thinking strategies into the reading selections. In addition, classroom teachers developed multiple unit guides to accompany each novel. Efforts were made to select certain skills, provide open-ended writing assignments, and design an element of self-directed learning for those students who did not require much guidance and monitoring. This became a strategy for addressing differences in reading performance.

In math, students who demonstrated advanced level performance were identified by the classroom teachers and the math coordinator. These students needed exposure to advanced level mathematical processes and content beyond their assigned grade level. Classroom teachers eliminated assignments when the students had demonstrated mastery. The time saved was used to meet with the math coordinator once every other week, or work on individual or group projects with the gifted and talented coordinator. In addition, the teachers prided themselves on the newly, locally-developed math curriculum that

focused on problem solving strategies through the use of hands-on manipulatives and conceptual understanding.

### Variety of Pedagogies

To accommodate the diverse needs of students in the classroom, teachers employed a variety of teaching strategies throughout the day. Instruction was delivered in small groups when meeting with students for skill reinforcement or to discuss a reading selection. When the teacher was delivering the same content to all students, large group instruction was held. Interest-based discussion groups resulted when groups of students were reading from a novel they had chosen for their reading assignment. The teachers also taught the students to participate in informal dialogues with their classmates when reading the same book. This allowed students to work with others in a homogeneously grouped situation based on a common purpose. The groups remained flexible and were formed based on the purpose for instruction, or the students' ability and interests.

The coordinators played an important role in the daily activities of the classroom. Lessons and materials were often modeled in the classroom, and technical assistance with new materials and practices was provided to the teachers upon request. Classroom teachers felt that this assistance was crucial as they acquired new ways to provide a variety of experiences to their students. The coordinators introduced new strategies by conducting lessons with small groups of students or with the entire classroom. This practice allowed the teachers to view colleagues in the act of teaching; it helped to initiate conversation about a specific strategy and how it could be used in the classroom.

### Common Language/Common Work Time

The term, differentiation, was frequently used at the school to describe why things were done the way they were. Forest Hills School organized opportunities for the staff to work together during grade level team time, because they wanted the staff to have an opportunity to discuss school issues. This time was used by the teachers to address student concerns, arrange enrichment opportunities for the students, discuss school-wide assessments (conducted by the state), and share curricular materials. Dialogue was frequent, and teachers learned to depend on each other for new techniques and supportive curriculum materials.

As the school moved toward differentiating curriculum to better address the individual needs of students, a common time for staff development opportunities was arranged. Staff members were assigned to revise the curriculum and to discuss practices and materials that might facilitate better learning opportunities. At one meeting, the language arts committee read a selection of research articles about a particular language arts strategy. The teachers debated its merits and discussed how the strategy might be more effectively used with their students.

### Permission From Administration

The administration recognized the need for the staff to meet on a regularly scheduled basis to implement changes being addressed at the school. The superintendent, the principal, and the staff rearranged schedules, advocated for curricular modification, purchased additional curricular materials, and provided the necessary technical assistance.

The administration realized that the role of the coordinators was twofold: to provide coaching services to classroom teachers and to provide direct services to the students who needed differentiated extensions to their learning. The coordinators were

charged with the responsibility of stimulating and supporting the classroom teacher as they made modifications to the curriculum; working with classroom teachers to develop plans for implementing new materials; and advocating for an integration of their services with classroom teachers. The administration believed that through the common efforts of all, the learning environment would be enhanced.

The administrators were the primary spokespersons to the community and to the board of education and advocated for these coordinators. While the classroom teachers addressed the needs of advanced-level students during the major part of the day, some students needed extensive support services and opportunities to work together.

### Coordination of Specialists

The coordinators were viewed as an integral part of the classroom learning environment and worked with classroom teachers in a variety of ways. Classroom teachers felt this direct assistance had an impact on the types of practices that effectively addressed the individual needs of students. The coordinators were skillful in their ability to work with teachers and viewed open communication and a trusting relationship as keys to their success.

The staff believed that the coordinators assisted them in providing instructionally appropriate services for students with special needs. The staff stated that they could not address the needs of gifted and talented students on a daily basis and were comfortable with direct services for students in a pull-out program. When students participated in activities arranged by enrichment and math coordinator, the classroom teachers were able to work on a more individual basis with the other students.

### Community Involvement

The teachers, coordinators, and administrators recognized the need to have community support. The teachers and coordinators at Forest Hills School involved parents in students' learning activities in a variety of ways. The parents volunteered to help teachers by reading to the students and lending support when teachers were arranging events that required more assistance.

The gifted and talented coordinator actively sought community and parental involvement by speaking at community events and service organizations and hosting meetings in the fall to explain the purpose of the school's enrichment program. Parents and community members were encouraged to offer their time and to share interests and expertise with the students. Parents responded by offering their talents in the form of minicourses, career fairs, and by providing funding for school-wide enrichment speakers.

## Conclusion

In this case study, I presented key players and their views regarding the instructional approaches used to meet the needs of gifted and talented students. I discussed the influence of school or environmental factors, and described the impact of program coordinators on practices used with gifted and talented students in the regular classroom. The themes suggest a continuous, comprehensive, yet interacting set of factors that explain how Forest Hills School creates a more comprehensive learning environment for students with special needs. Those of us in the field of gifted and talented education would like to see more services provided on a regular basis. The teachers indicate, however, that the

ideal amount of direct service cannot be provided solely by classroom teachers. Teachers support the efforts of specialists in providing extensions to students' learning when this cannot be arranged in the classroom. Through the combined efforts of all the staff, students can be seen as individuals with unique needs that may be served through support services. Forest Hills School accommodates the diverse learning needs of students by selecting a wide range of curricular materials, adopting practices that allow for instructing students with similar abilities and interest, and supporting coordinators when they work with new innovations. By emphasizing the integration of professional services, differentiated practices for the gifted are increasingly being applied in the regular classroom setting. Through sharing and integrating materials and practices, teachers are able to view students as responding in positive ways to their learning. Student growth and excitement motivates teachers to spend the extra time creating more appropriate materials for students and encourages coordinators to advocate for alternative practices when addressing the diverse needs of students in the regular classroom.

## Methodological Notes

This chapter is the product of a field study that I conducted from January-May, 1992. Eighteen days were spent at the site (approximately 90 hours). Several days were spent at the Town Hall reading historical documents and obtaining census data. I used some of this historical data and walked through sections of the community to seek information about its past. Pseudonyms have been used to name the town, schools, and informants.

### Data Collection

Naturalistic, non-participatory observations, in-depth interviews, and documents analysis were the major information-gathering techniques used in this study. Concentrated efforts were made to obtain the "emic" perspective or the perspective from those participating in the study. The focus of my research was to obtain information that would lead to a better understanding of (1) the instructional approaches used by teachers to meet the needs of gifted and talented students in the regular classrooms, (2) the impact of school or environmental factors that influence their use, and (3) the impact of the gifted and talented program or specialist on the practices used with gifted and talented students in the regular classrooms.

The research focused on a wide range of subjects. While the majority of my time was spent in a fourth and a fifth grade classroom, I also interviewed and observed the gifted and talented coordinator, principal, superintendent, mathematics coordinator, language arts/reading coordinator, and a student from the gifted and talented program.

Initially, I met with the principal of Forest Hills School to discuss the purpose of the study and obtain specific school demographics. He suggested that I contact individual teachers if I wished to visit in their classrooms. The principal, superintendent, and the secretaries were very helpful in providing me with school documents.

A typical day of field work included observation of and interviews with informants, descriptions of the settings, specific programs, interactions among staff members and students, and instructional approaches. In addition to the classroom visits, I attended team meetings, enrichment events, curriculum meetings, club meetings, and specialists' classes. During my field study, I made frequent trips to the school library and town hall to record demographic information and obtain newsletters sent to community members.

## Observations

The observational process began by gathering a panoramic view of the community, the school, and the classrooms. I then focused on the details within these environments. The focus narrowed and broadened repeatedly as I searched for the breadth and depth of the observations. Sustained observations were made of the two classroom teachers at different times of the day and week. Frequently, the observations and interviews became combined research events when the classroom teacher and I visited informally during grade level team time, or while the students were working on assignments.

Hand-written, detailed accounts of classroom events or incidents, teacher and student dialogues, and descriptions of practices and settings were recorded during each visit. These field notes were then transcribed after each session. It was useful to keep a notebook by the computer to record statements that needed clarification or questions to better understand the data. These inquiries were usually discussed at my next site visit.

## Interviews

Interviews expanded on formal and informal observations and served to clarify the meaning that participants had attributed to given situations. These interviews put into context what I saw and experienced at the site so that I could view these situations through the perspectives of the participants. Since their words and expressions carried different meanings and values, I learned quickly to savor the informants' interpretations.

Four types of interviews were used to collect information: structured, semistructured, informal, and retrospective. In structured interviews, at the middle and end of the study, I collected data about a specific question or hypothesis. These interviews provided explanations about certain events. Semistructured interviews, more exploratory in nature, were used to comprehend the fundamentals from an insider's perspective. From informal interviews or casual conversations, I discovered what teachers thought or how people's perceptions differed. This type of interview helped me to establish and maintain a healthy rapport with the subjects. Some interviews were retrospective as I asked the participants to reconstruct the past and recall personal, historical information. In this type of interview, I triangulated the information with other sources of data for accuracy.

Informant consent was obtained by all who were formally interviewed. Eight hours of formal interviews were tape-recorded and transcribed verbatim immediately following the discussions. People were then interviewed as their names emerged from the data.

## Documents

I obtained additional data from documents that were collected during site visitations to the school and to the town hall. These documents helped to interpret the data gathered through interviews and observations.

A variety of documents were collected from the teachers, specialists, librarians, town clerk, students, and secretaries. The following list of documents was used in my analyses: annual town reports; census reports; state and town school district profiles; historical reference books; proposed school budgets; minutes from school board meetings; student handbooks; newspaper articles; PTA flyers; school memos; curriculum guides; language arts evaluation report; school and enrichment newsletters to parents; student profile data sheets; report cards; gifted and talented program guides; literary magazines and other student products; formal reports to the school board documenting support services;

and classroom documents (e.g., worksheets, math extension activities, writing assessment procedures, and samples of comprehension questions). This diverse data provided different perspectives and clarified the "language" (i.e., meaning of words) and phrases used in the study.

## Data Analysis

I pursued a research strategy that emphasized triangulation and verification of data by using multiple sources. The triangulation of data allowed me to confirm or disprove information and forced me to refine my understanding of the differentiated practices for gifted and talented students. The triangulation process also improved the accuracy of the ethnographic findings by stripping away alternative explanations and hypotheses.

The data were subjected to cyclical, on-going analyses that began at the start of the research process. The processes of observing, interviewing, transcribing, editing, searching for key terms, posing hypotheses, building categories, testing categories, and searching for themes provided the framework needed to carry out this type of research. As I found myself recycling through these processes, this caused me to change the focus of my inquiries and improved the analysis of data.

This report is a summation of my field study and research findings at Forest Hills School. I thank the faculty, staff, and students for their honesty, energy, and desire to make a "difference on the hill."

## Postscript

Like so many other communities, Forest Hills has fallen victim to economic strains. This year, the town's welfare budget jumped from $20,000 to $60,000. Town workers went without a pay raise, and the voters twice rejected the school budget before approving a zero-growth spending plan. Consequently, the school has laid off an art teacher, eliminated Candice's position, and reduced the math coordinator's position to half time. Candice returned to the classroom, and Linda has left the district.

# CHAPTER 5: Successful Practices at Homer Schools—Respect For All Individuals

Marian Matthews, Ph.D.

"Remind me that if anyone has trouble with that centimeter conversion, to have you teach it to them," Mr. McMasters said, wearing his usual open-necked shirt, rolled up sleeves, jeans with a big silver buckle, and scuffed cowboy boots. He told John Black, a tall, lean fourth grader, also in jeans, shirt, and boots, "You have to show your work. I want to see what your head is thinking."

Mr. McMasters had just finished a lesson on how to find perimeters of various geometric figures. The class had measured the perimeters of their desk tops and other surfaces in the room. Figures were drawn on the board, and he had assigned the students problems #1-16 in the book as well as the "Thinker's Corner." If the answer was wrong, it wouldn't count against them, and if it was right, it would be extra credit. All students listened intently as Mr. Mac (as he was called by the students) explained directions: then they got down to work.

After Mr. McMasters had worked with individual students, he said, "You can multiply when doing perimeters. Now you can see why it was so important that we get the multiplying and adding down. Now we can do fun stuff with it." He talked about math aloud with students, his voice and manner reflecting his enthusiasm. He talked with one student about writing down what he thinks because sometime in geometry he might be required to "prove it." He wanted them to get in the habit of writing down everything they think. To the whole class he said, "I've given you plenty of time to do this in class, so I don't want anyone's paper to look like he or she rushed through it." He went to Ben, worked with him a few seconds, and spoke privately with him, "You can very easily raise your grade from a C to an A by not rushing through these problems. Do your work carefully." He looked at Jerry's work and said, "You're doing it exactly like I want you to except you may have a problem with number 5."

## Introduction

The foregoing was a typical episode in a typical day in the fourth grade classroom of Mr. McMasters from this small, rural school in the Southwestern United States. Can it tell us how educators provide for the individual needs of students, especially those who have (or have not) been identified as gifted and talented? Can it tell us what attitudes, teaching strategies, curricular choices, grouping arrangements, schedules, and/or other factors lead to successful practices in meeting student needs? I believe it contributes to our information along with observations of classroom experiences, interviews with people who work and learn in the school, and information from documents. This study reports on the experiences of the community at one rural school in the Southwestern United States that is trying to meet the needs of all students.

The paper first describes the setting of the school and community. The participants in the study are introduced in the next section; the findings are discussed both from their perspectives and that of the researcher. The major theme emerging from the study leads to the implications for gifted education. The last section includes a methodology note.

## Setting

Homer Elementary School is located in the town of Homer, a rural community of 119 in the Southwest. The closest large city (population 35,000) is approximately 40 miles away. The 17 mile road to Homer from Putnam, a university town, is straight and flat. One passes grasslands covered with wildflowers in the spring. No trees or hills block the views of fields and sky, except for those few trees that surround the widely separated farm and ranch houses.

Homer School is a one-story yellow brick building with several wings that dominate the view of the town. The parking lot in front includes a flag pole flying the United States and State flags, about 30 cars, and a yellow school bus with the words "Homer Schools" printed on the side. A handful of houses, the post office, three churches, a community center, the new Homer Senior Citizens Center, the cemetery, and Homer Fire Station, make up the rest of the town.

Homer is a farming and ranching community; milo, peanuts, wheat, dairy and beef cattle are the major products grown. Most community members consider themselves middle class, but the students who attend the school range from lower to higher socioeconomic levels. Lower socioeconomic students come from the two church-sponsored children's homes. (Children are placed in these homes when their families are unable to care for them.) These children are the children of the farm and ranch workers. Many workers are originally from Mexico, so a significant number of students in the school are either monolingual Spanish speakers or have limited-English proficiency. One might possibly expect a conservative "Bible Belt" outlook from this type of community. However, the Homer school has been a forward looking school for many years. In the 1970s, students were on individually-paced plans. Several faculty members from a nearby university sent their children to school in Homer even though they were not residents of the town. This was possible because state-wide funding for schools allows most residents a choice as to where to send their children to school.

Many rural schools in the state are facing a loss of student population due to a general decline in population and a decline in birth rate as farmers and ranchers age. Homer has been fighting this student loss by trying to make their school one of the best in the area. They have been very successful as they have had a 63% increase in student population in three years. Many of these new students came from Putnam. The Putnam district maintained a traditional skill-based approach to curriculum, and parents were not satisfied.

At the time of the study, approximately 160 students were enrolled in the Homer school in grades K-12. One hundred twenty students (one-third were Hispanic) attended the elementary school, grades K through 6. Homer Elementary School had one class per grade and class sizes ranged between 8 to 20 students. A reading specialist and special education teacher were available full-time to students in the elementary school; students shared the P.E. and music teacher with the high school. The kindergarten teacher worked with gifted students on Friday when kindergarten was not in session. She had a pull-out program for six students (grades 1 through 6) and met with students in small groups for one hour each. The gifted program was limited because of the restrictive state guidelines for identifying gifted students:

"Gifted Child" means a school-age person whose measured intelligence quotient, either verbal or non-verbal, measures at least two standard deviations above the mean on an intelligence test approved by the State Board and who meet at least one of the following additional criteria:

a. Score of at least the 95 percentile and above of the total battery score on a standardized achievement test approved by the State Board;

b. Outstanding creativity or divergent thinking as defined in B.6.3.1.a.

c. Outstanding critical thinking or problem-solving ability as defined in B.6.3.1.b.
(SBE Regulation No. 90-2, p. B-31)

All the elementary teachers, the gifted teacher, the reading specialist, and the special education teacher worked in the elementary wing of the school. The high school and elementary wings were divided by school offices and the gymnasium. To get to the elementary wing, visitors pass through an uncarpeted concrete hall with beige tiles on the wall. Through the windows one can see the cafeteria where students are served both a hot breakfast and hot lunch since approximately 75% were on free or reduced meal plans. There was a room with computers on the right along with a separate music building (a temporary one) outside.

The elementary wing was uncarpeted. Often the walls were covered with children's work: murals, writing, collections, art work, announcements, etc. Next to the cafeteria was the teachers' lounge and workroom, Chapter I Reading office, and the nurse's office. Across the hall was the preschool program.

Most observations were completed in third and fourth grade classrooms. In the fourth grade classroom desks were often arranged in different ways. The bulletin boards appeared to be put together by students as the lettering was crooked and the art work was organized in a rather haphazard manner. One rectangular table was located against the side wall and another against the back wall. A round table was at the front of the room; the teacher's desk was at an angle to the front.

The third grade classroom was set up in different ways, but the desks were always arranged in small groups. The teacher's desk was located across from the door but toward the side wall. Next to her desk was a very large bulletin board, "Inventors and Inventions," with pictures by children on the kinds of inventions they'd like to see. Math manipulatives were located on the shelves next to the bulletin board. An apple computer and printer was located at the back of the room; next to that was a big bathtub filled with pillows and rug samples. On the other side, shelves with books indicated the library and quiet reading area. On the right hand side of the room were the cabinets and sink area, the hangers for the students' coats, and shelves for other materials. The blackboard was in the front of the room. Books about inventions and folk tales were on the chalk tray.

## Informants

The informants for this study were the Superintendent , Howard Slater; the head teacher at the elementary school (also the first grade teacher), Linda Miller; the fourth grade teacher, Dennis McMasters; the third grade teacher, Liz Herring; the gifted teacher, Peg Strickler; two fourth grade students, Edwardo Jimenez and John Black; and a third grade student, Jed Slater.

Howard Slater initially provided access to the school and to the teachers. On the first day, he described what they were trying to do with the elementary school and introduced me to Linda Miller. She showed me around. He encouraged me to visit at any time and always seemed pleased to see me when I came. He did not intrude on my time or insist that I talk over the findings with him.

Mr. Slater, a man in his late 30s, came to Homer from a school principalship on the western side of the state three years prior to this study. He had worked for 12 years as a teacher before becoming a principal and was originally trained as a music teacher. He taught music classes part time at Homer while serving as the superintendent. During the study year he was working on his dissertation to complete his doctorate; he left Homer at the end of June, 1992 to accept an assistant professorship in Educational Administration at the local university.

When Mr. Slater came to Homer, he made considerable changes in the school. A new principal had been hired, and Ms. Miller was brought to the school by Mr. Slater. At the time of this study, all the teachers at the elementary level had been there for three years or less, except for the fifth grade teacher. A concerted effort was made by Mr. Slater, in conjunction with Ms. Miller, to hire excellent teachers [who had a philosophical outlook that resembled theirs]. Mr. Slater and Ms. Miller developed the present gifted program.

Mr. Slater and Ms. Miller both commented on their collaborative efforts and similar philosophies. Ms. Miller had taught for 12 years at the elementary level. She had taught at Homer for three years and transferred there from teaching in Texas. At the time of the study, she was enrolled in the Master's program at the local university. She consistently encouraged the faculty to work together and share ideas. She had established a program for the 1992-93 school year whereby teachers could visit each other's classes and obtain a substitute in order that they might do this.

The majority of my observation time was spent with Mr. McMasters. He was more experienced and innovative than the other teachers. He was a second year teacher although he was in his 40s. He had gone back to school to get his teaching certificate after working in many different occupations, including oil field roustabout and welder. No students in his class were formally identified as gifted although he referred one of the children to the gifted program at the end of the year.

Mrs. Strickler taught kindergarten full-time four days a week and on the fifth day taught in the gifted program. A second year teacher in her early 20s, she told me that she had no formal training in gifted education, but had done a lot of reading and talking with others about how to work with the children. She mentioned that the lesson plans for the class were developed around the students' interests.

Also I interviewed Mrs. Herring, a first year teacher in her early 20s. She did quite a lot of teaching around themes and centers. She considered herself a whole language teacher and used a literature-based approach to teaching reading. She had two students in the gifted program; she described one child as extremely well adjusted and the second with severe emotional problems.

The two fourth grade students interviewed were John Black, referred by Mr. McMasters for the gifted program, and Edwardo Jimenez, a bilingual child with considerable talent in math and science. Mr. McMasters told me that he thought John was gifted for quite some time, but his emotional problems precluded his referral for awhile. "I considered putting John in the gifted program, because gifted kids, like John, are always through before everyone else. He gets tired of always being responsible for teaching

[others], and I don't blame him for that. The reason I didn't put John in the gifted program [is because he was having problems]. [His mother] was getting calls from the teachers two to three times a week, because John is a different kind of kid; you can't [confront him]." He described him more positively as well. "John is a student. He enjoys things that are studious. You ought to see some of the books this boy checks out from the library. Now, he may not read the whole thing, but he is getting a lot of knowledge from them."

Mr. McMasters also described Edwardo. "You wouldn't believe that boy. Last year he wouldn't do anything [but this year it is different]; he works as hard as he can. And because of it Edwardo is proud." He described how Edwardo became very competitive with the math facts tests and told the top student, "I'm going to beat you tomorrow." He did beat her, and they were "at it all year." Edwardo's first language was Spanish. Mr. McMasters thought that was why the boy was having trouble with reading and English work. He said that Edwardo did excellent work in science as well as his math.

The third grader I interviewed was Jed Slater, who had been in the gifted program for a year. Mrs. Herring described Jed. "He is definitely a leader; he is so smart, and it makes him feel good to get to go to the gifted program. . . . Jed's presence affects our class . . . he can help me peer teach; he understands things . . . he knows vocabulary that I don't even know. He is just a very bright boy . . . also very loving and very caring, and he has a very kind heart."

## Findings

I visited Homer School and talked with administrators, staff, teachers, and students. I gained an impression of a place that was filled with excitement and enthusiasm. People were happy to be there. They felt that they were involved in something that mattered, the education of each and every child. Administrators, teachers, staff, parents, and students believed in themselves and each other. They shared a vision of excellence for the school and community, and worked collaboratively to provide maximum opportunities for all the students to reach their potential. How did the community at Homer Elementary School work together to meet the needs of all students? These findings are documented in this chapter.

### A Shared Vision of Excellence About Learning

Faculty and staff at the Homer School were enthusiastic about the experiences and programs they were able to offer to students. They believed they were working together to make Homer Elementary one of the best schools in the state.

#### Homer Elementary—An Excellent School

Mr. Slater's vision for the school was shared by most teachers and the community and is reflected in the title of the 1991-1992 Faculty/Staff Handbook: *Rising Toward Excellence.* At Homer School all members of the school community—staff and teachers, and students, could make the most of their abilities. Mr. Slater said that his school was "a small public school with a private school touch . . . and that vision is shared by the elementary [teachers]." "A superintendent should be an "educational leader," he said, "who is a provider of programs for kids, not just a businessman."

Many rural schools in the Homer area are losing money daily because of population loss. (State funds schools based on pupil population.) Homer was not. The

superintendent said, "Homer is an excellent school. We have been getting professional people in Putnam coming out to visit and look at our program. . . . They send their children to Homer after seeing what the program is like. . . . I foresee us being one of the bigger small schools in the area before very long." When the school enrollment was high, Mr. Slater had enough funds to support innovative programs (including the gifted program), training for his staff, and materials for both staff and students.

### Excellence of the Teaching Staff

Mr. Slater believed in the excellence of his teaching staff. "I think the greatest asset we have is the creativity of our own staff," he said. Considerable time has been spent trying to find good people, the kind of people that have "high commitment." As a result, "They . . . develop themselves . . . what we have in those five elementary classes are five excellent teachers. . . ." Leadership emerges from the primary elementary grades, and therefore Mr. Slater allows the staff to "feel free to do whatever they want to do." The teachers agreed. Mrs. Herring said, "The administration has faith that what I do is best for kids. . . . I have support, and that is real important." According to Mr. Slater, the teachers are demanding, their standards are high, and they "really stretch the limits of their students."

### Belief in Students: Examples

Mr. Slater said that students are the most important part of the school. The most important thing a school could do is provide "enrichment opportunities for all kids, not just the gifted kids." He said, "We try to meet those needs in the classroom before we ever identify them as gifted kids . . . we want to identify those kids very early." At Homer they test any child thought to be gifted no matter who identified the child—parent, peer, or teacher. However, he said, "If we have a kid with a special need who is not in the gifted program, we will help him or her anyway. If they have a special talent, we work with those kids."

Although the state has a rigid definition of gifted, children at Homer who fell below the state definition were included in the gifted program if it was felt the child would benefit. The teachers mentioned two students in particular who were allowed into the program even though they had not met the state standards. The teachers believed that many of their students were potentially gifted. Ms. Miller referred half her class for the gifted program during its first year, and Mr. McMasters believed that at least five of his students should be in the same program.

Even if the students were unable to meet the criteria for the gifted program, teachers expected students to achieve high academic standards and worked with them, both individually and in groups, to achieve such standards.

Mr. McMasters suggested that the students' enthusiasm comes from the fact that they are successful, and then go on to do more. He was able to identify specific strengths of students and mentioned a student named Ben. "I asked Ben a question, and he answered it word for word from material that I had given him months ago. . . . I tried to make him aware that he has talent that is usable. . . . I really think we are going to watch Ben blossom."

All of the teachers worked in much the same way. Ms. Miller wasn't upset when they told her she could only refer her top three students for the gifted program, because "the challenge is going to be there [in the regular program]." She commented on her students' work. "I have some kids who move beyond [the work the other students] are

doing . . . , I took the time to move them ahead." The teachers constantly showed me their students' work. One typical comment was, "Did you read my good ones back there? Man, some of them were awesome, weren't they?"

During the time I observed at Homer School, I never heard a negative statement about a child. Some students had problems, but the teachers knew students well enough to know that the problems were frequently caused by frustration or something that might be going on at home. Mrs. Herring said of one of her students:

> He was turning in good work and things were clicking for him, [but then he slowed down] towards the end of the year. He is a smart child and an excellent reader, [but] he doesn't always know what he reads or he doesn't know how to answer the questions. He just needs a lot of love, patience, and guidance. . . . I was frustrated this year, because I couldn't figure out what motivated him. I know that Peter could achieve more; he just doesn't have confidence in himself.

Mr. McMasters believed in students even when they didn't believe in themselves. One of his students had shown a huge change this year. "Last year Edwardo really had some serious problems in math, but this year he is one of my fastest students." He and Edwardo had had some problems the year before because the student seemed to have "a chip on his shoulder." The teacher said, "Now Edwardo is a strong B student and has worked for every bit of it." Also, when students made mistakes on their work, Mr. McMasters would often take the blame for not teaching the material properly.

### High Expectations for Students/High Level Thinking

Part of the high expectations at the Homer School had to do with the kinds of things that were discussed in the classrooms. Teachers used language and ideas that were advanced for the grade level; for example, the fourth grade teacher talked about the distributive property in relation to math. Teachers were constantly explaining the relevance of the topics under discussion to real life; this was shown in the episode at the beginning of this report when fourth graders were working on perimeters and areas. Math was worked out on real problems such as measuring the perimeters and surface areas of their desks.

Other teachers did similar things. Mrs. Herring asked a group of second and third graders about the piece of rain forest they were going to buy resulting from a project they had completed. They had collected $100.10, and she asked, "If I can buy one acre with $30, how many acres can we buy?" One of the younger students immediately responded, "Three acres." They then discussed what an acre was and how it related to the size of a section (which is how acreage is described in this part of the country).

### Teacher and Student Enthusiasm

In Mrs. Herring's class the students could choose their own spelling words. When one student chose "exaggeration," the teacher said, "Ooh, you all have chosen hard words. I like the way you challenge yourselves." The teachers were often excited about material under discussion and, therefore, encouraged excitement in the students. Mrs. Herring also used advanced words for the children when they began their invention unit, such as "serendipity" and "innovation." They used the brainstorming process frequently. One example was to brainstorm "foolish machines" to begin thinking about what they wanted to do for their inventions. She often had her students work with materials in concrete ways, such as using manipulatives in math or hands-on science activities. In that way she knew that they had understood the material conceptually and not just memorized it.

### Support for the Gifted Program

The superintendent implemented the gifted program in its present form and was its strongest supporter. According to state statistics, Homer identified 8% of its population as gifted; this was a high percentage as schools were generally funded to about 3-4% of the population. In order to implement the present gifted program, the superintendent said, "I put community pressure on [the board]. I put faculty pressure on them. I brought in experts to testify. . . . " He also implemented an enrichment program for all students. The head teacher stated that the superintendent cared about these programs because he wanted "programs that would build Homer's academic status." He cared about meeting the needs of all students.

## Curriculum Designed to Meet the Needs of the Children

The personnel at the school were interested in meeting the needs of all students, and the curriculum was designed in unique ways to meet those needs. Teachers searched for and shared new methods and materials to adapt the curriculum.

### Flexible Curriculum

Both in the regular and gifted classroom, the curriculum was flexible enough to meet the needs of all children; teachers were encouraged to provide whatever was required to help children achieve at high levels. Mrs. Herring said, "You know you've got to have a flexible curriculum. I looked at what was in the curriculum guide, but I did what I wanted to. . . . You can work with any curriculum as long as you are creative." Mr. Slater, superintendent, stated that as far as curriculum is concerned, "We do draw from the talents of our staff, special talents . . . it's not a preplanned curriculum. It's what the teachers generate; it's their passion in life . . . and that's what they are giving to their kids."

### Curriculum Designed to Work With Student Strengths

Several teachers tried to emphasize a child's strengths. Mr. Slater's son attends the elementary school, and he said, "In my case they identified my son's reading and mathematical ability; I think that's great because he really loves that." Teachers also emphasize the interests of the child. Acceleration is available in some subject areas. Mrs. Strickler mentioned that two sixth grade students will be going to the seventh grade for math since they are very advanced in that area. She said that they encourage acceleration as well as enrichment at the school. "You must let them go as far as they can because . . . if you start holding kids back, you've lost them. . . . "

### Holistic Approach to Teaching

Homer School had a holistic approach to teaching which all believed was a strength of the program. Teachers integrated the curriculum as much as possible through a theme approach. One theme all of the teachers worked on in the spring semester was "Saving the Rain Forest." The superintendent mentioned this theme. "I don't see activities for gifted kids not being also open for other kids, too. The rain forest unit was pretty amazing. You might just see gifted kids working on that, but all of [the kids] were involved in that."

### Student Choice

The children in Homer Elementary School had many choices in the classroom. Students were often involved in things that they chose on their own. Mr. McMasters allowed students to write when they wanted to and about topics that interested them. Also,

he allowed them the choice of a peer editor when taking their papers to final copy. They were able to choose what they wanted to do for the science fair. Mr. Slater said choice occurred especially in the enrichment program, "The kids make the choices; we don't tell them what to do."

### Student Self-Direction and Motivation

Because students were allowed choices, they worked on their own much of the time. They were self-directed and motivated. They were allowed to leave the classroom without permission for the bathroom, or the library, or to their special classes. When the students finished their work, they knew where to put it so that they would be able to work on it at a later time. When working in small groups, they choose group roles on their own, such as the monitor, the leader, one to draw, one to write, etc. I often saw the teachers leave the room, and the students continued working on various projects without interruption or distraction. The students often got up and moved around the classrooms without permission: going to various centers, sharpening pencils, washing their hands, getting a drink, getting materials for their projects, getting or giving help, getting books to read, or finding various places in the room to work. Students were allowed to talk while working together or while the teacher was talking. I noticed little overt discipline procedures during my observations.

### Individualized Work for Students

I rarely observed the teachers at their desks since they were constantly circling the room to help groups and individual students with their work. Because of this, teachers understood the individual needs of the students. Most of the teachers individualized curriculum as much as possible. Mrs. Miller said, "[In] the reading program . . . I individualize the instruction totally. . . . I don't even order textbooks for reading." In her second and third grade classroom, students read from trade books that they chose themselves.

Another way to meet student's individual needs was through the use of centers; the teachers used them extensively. Mrs. Herring mentioned, "I let students go to whatever center they wanted to . . . they go at their own pace." In addition, Mrs. Herring said that it was important for the children to have ownership of their work. She provided many opportunities for students to use artistic and writing talents at the centers.

Other curricular activities showed a respect for individual needs. The math program involved work with math manipulatives and the *Math Their Way* program. Both activities invite children to come up with different ideas about how to solve problems. For most students math was one of their favorite subjects. Also, Mr. McMasters worked on self-esteem frequently, because he felt some students needed encouragement in that area. Many children at Homer school come from two local children's homes, and a number of students are monolingual Spanish speakers. None of the teachers are fluent in Spanish, but they try to speak what Spanish they know and encourage the children to speak in Spanish and other children to translate. They also supported bilingual parents as volunteers in the classroom so that the children will feel comfortable. Spanish songs and books were included in the curriculum.

### Student Prepared Bulletin Boards

In the first, second, third, and fourth grades, students prepared the bulletin boards to supplement the curriculum areas that they were studying. The teachers believed that this

helped students integrate knowledge and to demonstrate their various talents such as planning, decision-making, design, artistic talent, etc.

### Innovative Teaching Methods

Skills were usually taught in context. Because the teachers worked very closely with students, they were immediately aware of misunderstandings and worked to correct them. One day fourth grade students were to take notes for some reports they were writing. As one group didn't know how to take notes, the teacher taught note-taking to that group only (not the whole class) and did it in conjunction with the assignment. Mr. McMasters especially enjoyed taking spelling words from the social studies and science curriculum. He also taught punctuation through the "morning message." In addition, teachers were beginning to use alternative assessment measures such as narratives for report cards and portfolios for evaluation purposes.

### Collaboration and Communication Throughout the School/Community

Collaboration and communication, key to the learning process at Homer Elementary School, occurred at all levels among administration, teachers, students, parents, and community members.

Mr. Slater consistently visited in teachers' rooms at their invitation, and they were in his office to share ideas and concerns. The students came to his office to read and share their projects and writing, and he and the principal visited classrooms.

### Teachers Participate in Decision-Making/Staff Development

The teachers participated in the decision making process at Homer, even in the hiring of new teachers. Ms. Miller said, " . . . I get to interview and have a say in the decision of whom we hire, so that I can see if their philosophy is going to blend with what we are trying to do."

Mr. Slater said, "If you want to do something for good staff development, hire good people—they will develop themselves. . . . [I have] five excellent teachers who share [and] help each other. They are not afraid to make suggestions because that's just how they operate now." He would support other types of networking, especially with the university. He was supportive of my research efforts at the school and has given money (with Board approval) for various university programs that would be beneficial to teachers, such as The High Plains Writing Project—a project that encourages teacher and student collaboration. Homer provided the greatest amount of funding for that project of all schools in the area. Two teachers from Homer participated in the Summer Writing Institute in 1992 and have continued to be active with the Project throughout the year, conducting research in their own classrooms on the kind of writing that they and their students are doing.

### Teachers Share Ideas

Teachers remarked on how frequently they shared with each other; I saw them in and out of each other's classrooms sometimes as much as four or five times a day. Mrs. Herring remarked on how the supportive and sharing staff helped them to meet their children's individual needs. She said, "I could not have done it this year without the teachers giving me ideas and feeding off each other and saying, 'I'm doing this, what do you think about this? I've got this individual, and he needs help in this; how do you handle it?' You don't have to use their ideas but you can expand from their ideas and combine it

with other things." Mr. McMasters remarked on the cooperation at Homer. "[We] have got an environment of different ideas, different people, and different capabilities." He said that teachers worked together extremely well on the theme of the rain forest.

### Teachers Improve Their Teaching/Programs

Ms. Miller and Mrs. Shepherd, the second grade teacher, were thinking about new ideas for the enrichment program. Ms. Miller said, "We felt like next year we need to do some serious rethinking and get more challenging things going." Ms. Miller said of her classroom, "I can see where I need to pull more in the comprehension area and more in critical thinking out of that child. . . . " She knew that she could go to Mrs. Strickler for help. Mrs. Strickler began "reading, training, thinking, and learning everything she could about [the gifted program] . . . " when she was hired to teach in that program. All the teachers whom I talked with were constantly working to improve their programs with new ideas gleaned from colleagues, the administration, students, the parents, the university, and their professional reading.

### Teachers Support the Gifted Program

The classroom teachers supported the gifted program and said that if they ever needed anything from Mrs. Strickler, they would be able to get it. Mrs. Herring mentioned that she went to Mrs. Strickler quite frequently about a gifted student with problems. The teachers said that they were never concerned when the children missed their classes for the gifted program because in Mrs. Herring's words, "I knew those kids would always make it up . . . [their work] was so individual anyway that they could get up right where they left off." She said that it was important that they go to the gifted program because, "I really do think they need that [gifted program]. They need to be challenged and need that extra umph . . . and it makes them feel good, and it makes them feel special; they love it."

### Students Help Each Other

Peer tutoring takes place in the classroom, especially with high ability students in flexible ability groups. One fourth grade student had considerable trouble with math and was in a group that required a lot of support, but he had outstanding reading ability, and the group worked almost completely independently in this area. Several teachers mentioned how the students help each other. Mr. McMasters said, "My gifted kids end up teaching." He had no students formally identified for the gifted program, but he considered many students gifted in one area or another. He demonstrated how he got students to help each other. When Edwardo didn't understand how to do some math problems, McMasters said, "Find out if Jeff knows how to do them and get him to help you." He often told one of the bilingual students, Anabel or Edwardo, to help Anthony, a monolingual Spanish speaking student, understand the directions. Because students could see that the teacher cared about communicating with Anthony, they tried to communicate with him, also. Thus, students who were good at math would help those who were not as proficient, and those that could speak Spanish would help the non-English speaking child. There were a number of flexible ability groups in this classroom. The children pursued enrichment and interest areas in concert with other children. Every child was an expert in something.

One day when third grade students were working on spelling words, I observed some of the students drawing pictures and others writing words. They often conferred with each other on how to spell words. Mrs. Herring also had the bilingual students translate for the limited-English speaking students. She let the students answer in Spanish and/or English. In this class, the students worked quite frequently at centers and helped each other with the assignments there. One day two students wanted to write a book

together. This was a concern since one of the students, Paul, had trouble working with other students. After questioning them (to see if they were serious), the teacher let them work together. As they worked they solved several problems, for example, figuring out how to spell a word. At the end of the day Paul and Mike shared their work with the teacher. She could see that they had accomplished quite a lot.

### Community and Parent Involvement

At Homer the community was involved in the school through the enrichment program. Mr. Slater said that they bring in "community people who volunteer to be a part of the enrichment program." Parents were also involved in the Homer schools. When working on a student's IEP (Individualized Educational Plan), Mr. Slater stressed the need for the student, the teacher, the gifted teacher, and the parents to work closely together to identify the student's strengths and needs. He said, "We sit down and discuss the needs with the parents." He also stressed that Mrs. Strickler made parental contact frequently and said, "We make an effort to visit with parents." Bilingual parents sometimes worked in the classrooms as aides to help those students who had limited-English proficiency. Parents worked in other capacities as well—wherever there was a need, and a parent could help.

## Themes

Based on the findings, Homer Elementary School was a place where members of the school community could work to make the most of their abilities. Everyone was enthusiastic and excited about the school as a place of learning. Everyone worked to make the school an excellent place to be and an environment that welcomed and valued all members of the community. There were opportunities for all and a belief that all could achieve to their highest potential. Working together was encouraged; most of the students and staff collaborated frequently on varied projects. The major theme that emerged from the study was that of respect.

Respect is demonstrated through the administration. They admire and respect the teachers and allow them the opportunity to teach as they need to. Teachers are able to choose curriculum, help interview and hire new faculty, and develop a philosophy for instruction. They are encouraged to share and help each other. They are able to present their point of view to the administration if there is a disagreement. This respect is mutual because teachers know that the administration will support their ideas and allow them to proceed with what they think is best for the students and the school. Each believes that the other has the best interests of the students and the school at heart.

Teachers respect themselves and each other and meet often to share ideas and materials. They aren't afraid to be creative with the curriculum and with the students. They believe that if they fail, they will receive help, not censure. They are not afraid of new ideas such as encouraging university personnel and university student visits. The teachers plan together for major theme-based learning across classes, and then make whole-school presentations together. They have an open-door policy, inviting any and all visitors into their classrooms. They allow students to accelerate, because they are not afraid that the teacher at the next grade level will be unable to accommodate students. They are constantly looking for ways to best meet the needs of all students, including the gifted.

The teachers and administration respect the students, and students respect each other. The teachers talk about teaching to the students' strengths and through their interests. They provide for the needs of children whether they meet the definition of gifted

or not. They provide challenge in the classroom and allow children to choose their own projects and to work at their own pace. They believe that the students will choose to do things that will advance their own learning; they also believe that one can learn and have fun at the same time. The teachers believe in the students, and the students believe in themselves. Even though students may not be doing well in one area, the teachers and students may talk about a subject in which they are doing well; everyone knows that a setback doesn't necessarily mean failure, just an opportunity to work through the problem on some other level.

## Possible Implications for Gifted Education

This study demonstrates the importance of supporting the regular classroom teacher. Most teachers go into the profession believing that they can help individual students achieve to the best of their ability. We should show respect for what the teacher knows and wants to accomplish for all students. We must encourage teachers to collaborate on the best methods and materials to meet the needs of students. The teacher of the gifted must interact frequently with regular classroom teachers to seek their knowledge and understanding of individual students. She must also be seen as a resource for all students, not just the gifted. The gifted program should not be restricted to identified gifted students, but seen as a program where a student who needs advanced help could receive it. The gifted program could encourage enrichment as a means of growth for all. If we promulgate a supportive atmosphere, we encourage innovation and creativity throughout the school. Making a mistake will then be viewed as a growth experience rather than failure.

Work completed in the gifted program should be shared with the whole school and community. Any student or teacher who wishes to participate and collaborate with the gifted program should be encouraged to do so. We should solicit involvement at the highest levels, encouraging the administration to become active in the program and also encourage involvement from the faculty. We should go into the regular classroom to support the teacher, offering materials and methodological support. We should also encourage the regular classroom teacher to contribute to the gifted classroom, and provide support there.

Collaboration and communication at all levels means high expectations for all; flexibility in meeting the needs of teachers, administrators, students, parents, and community; and a respect that can only increase as we gain a better understanding of our colleagues. It has worked in Homer, and I believe it could work in any school.

## Methodological Notes

Several university professors were familiar with the Homer School and had heard of its reputation as forward looking. A secondary education professor had visited the school and worked with the superintendent on a plan for improving the high school. He encouraged me to visit the school and set up a meeting for me with the superintendent, Mr. Slater. The superintendent described what they were trying to do with the elementary school and took me to meet the faculty.

I entered the school several times during the fall of 1992, visiting all the classrooms and meeting all the teachers. I chose Homer School for the Successful Practices Study because I knew the teachers were doing innovative work in their classrooms and were

excited about their program. In addition, the Superintendent, a colleague, and the state agency also recommended Homer as a possible site.

I visited the fourth grade classroom for a full day at least six times during spring of 1992. When I realized that no students from this class had been identified for the gifted program, I visited the third grade classroom twice. Two third grade students were identified as gifted. During my visits, I took extensive field notes and talked informally with the teachers and students.

Also, I conducted in-depth, open-ended interviews with the classroom teachers, the head teacher, the superintendent, and several students from each classroom. The targeted students interviewed included one previously identified gifted student from the third grade, one potentially gifted student from the fourth grade, and one average student from the fourth grade who did outstanding work in math and science. I interviewed the superintendent, the students, and the teachers (at a local restaurant). The student interviews were approximately 30 minutes in length, and the adult interviews lasted from one and a half to over two hours. Unstructured interviews consisted of open-ended questions with probes of participants' statements. Similar questions were asked of each participant to obtain a range of viewpoints on the issues. Interviews were taped and transcribed.

During the course of the study, several kinds of teacher and student documents were reviewed such as student work in several areas, writing, video tapes of student presentations and plays, science fair materials, and teacher reports. I attempted to obtain as much information as possible to understand how Homer Elementary School meets the needs of its gifted students.

# CHAPTER 6: Successful Practices at Maple Grove Elementary School—Professionals as Partners for Children

Thomas P. Hébert, Ph.D.

## Introduction

The economic recession of the 1990s has had a major impact on the nation's educational system. School budgets have been cut drastically, and special programs are being eliminated. As storefronts become empty and businesses close, many New England communities have begun to take on the appearance of ghost towns. Newspapers carry stories daily of cuts in funding, increasingly limited resources, and overcrowded classrooms. The economic times have demanded that school districts make do with much less. Hard times in New England have made it difficult for educators to salvage programs for high ability students. With gifted and talented programs being eliminated or reduced, teachers have been asked to meet the needs of high ability students in the regular classroom. Educators have responded by pointing out that classroom teachers have fewer resources and less time to deal with the needs of advanced learners; they struggle to help most students simply meet minimum standards established by the local school boards or state departments of education.

This chapter is the story of a school that faced these problems. In many ways this school is like others in communities throughout New England. The gifted and talented program was slashed by budget cuts after educators had struggled for over 20 years to develop an exemplary program for its 10 elementary schools. The program had provided each elementary school with a resource room teacher. Bright children were given the opportunity to explore self-selected topics of interest through independent research. Now, the school board expected classroom teachers to enrich the educational programs and meet the individual needs of these same students through the regular curriculum.

This profile is about Maple Grove Elementary School and the students of one fourth grade classroom. The following section describes the setting. Section two introduces the informants who shared their understanding of what happens at Maple Grove Elementary School to provide high ability students with differentiated learning experiences. Section three presents the findings of the study presented from the perspective of teachers, students, and the administrator. The fourth section addresses recurring themes that theoretically explain the differentiated practices; the final section presents a summary statement and a note on methodology.

## The Community

When I mentioned to colleagues that my research assignment was at Waverly Heights, many raised their eyebrows as if to say, "How fortunate!" They described Waverly Heights as an affluent suburban community with elementary school children who wear designer clothing and follow schedules filled with ballet lessons and soccer leagues. My colleagues were mistaken. As I drove off the busy interstate highway, I came upon a housing project in serious disrepair. Wrought iron bars covered the windows of first floor apartments. Next door to the complex was a package store where a large group of men

gathered outside the doorway. Across the street was an aerospace metals factory; farther down the same street was another large industrial plant. The environment was much different from what had been described to me. I crossed a set of railroad tracks and noticed Maple Grove Elementary School, one block down the street.

The streets surrounding the school were lined with Cape Cod-style homes and were painted in traditional New England colonial colors. The neighborhood appeared to be struggling to protect itself from the problems facing the nearby inner-city as many homes were surrounded by chain link fences.

According to the principal, the neighborhood surrounding Maple Grove Elementary School continues to be the cheapest place to live in this fringe community. The neighborhood has become the home of a new multicultural population of white and blue collar workers who have left the urban centers in search of a better life. Families here are often first time home buyers. Many have received financial assistance from the government through a Section Eight Housing Program. Some people have suffered from the economic recession, however, and have been forced to move back to the urban areas or to their native countries. Residents have the nearby dilapidated neighborhood as a constant reminder of the inner city problems they have managed to escape, yet they know their modest environment does not compare to the more affluent sections of town. In other sections of Waverly Heights, there are older, more elaborate homes complete with colonnades, private entrances, swimming pools, and plush landscaping.

Waverly Heights, a community of approximately 58,000 people, serves as a bedroom community to the larger adjacent city. There are few manufacturing companies in the community, and many residents commute to the nearby metropolitan area or to other parts of the state for employment. The district consists of elementary schools, two junior high schools, and one high school. The public schools in Waverly Heights enroll approximately 86% of the school-age children in the community; the remainder attend private schools in adjoining communities. Approximately 85% of the high school graduates pursue further education and three-fourths of the graduates enter four-year colleges. The population of this community has generally become older. The growth rate has declined slightly due to an increasing tax rate.

## Maple Grove Elementary School

The two story, brick school building was surrounded by a chain link fence. Judging from its immense size, I thought it had once been a high school. The school was on a large tract of land with sprawling lawns in front and back. An annex held the gymnasium, cafeteria, and library. Behind the school was a football field, a running track, and a basketball court; these were also protected by chain link fences.

Originally built in 1930, Maple Grove Elementary School continues to be the large elementary school it was originally designed to be. It has also served as an active community center. It is a hubbub of activities, yet I was impressed with the quiet atmosphere throughout the old building. As I traveled throughout the carpeted corridors, I noticed students and teachers quietly working on various projects in relaxed, conversational tones. The walls of the corridors and stairwells were painted in pastels of lavender, peach, mint, and sea blue. These pleasing colors provided students with a warm, comfortable feeling in a school designed with the high ceilings and gigantic windows of yesteryear.

Over 350 children attend Maple Grove Elementary School in grades kindergarten through 6. Thirty-eight percent are from minority populations, and approximately one-third of the children qualify for free or reduced lunch plans. Twelve percent of the students receive service from the staff of the English as a Second Language Program.

The students of Maple Grove School speak twelve different languages. Multicultural education appeared to be a strong component of the school's program; this was evident in the student products on display in the corridors. African masks adorned several walls, colorful papier mâché, aquatic creatures from Japan hung from the ceiling of the first grade corridor, and next to the main office was a display of international puppets. A large display entitled "Leap Into Literature" featured a kangaroo character named "Readeroo" who "traveled" with an international passport and was moved from continent to continent as the student body read different books. Under the student products, I read family names such as Patel, Wozniak, Maldonado, Nascimento, Perez, Rivera, Ramchandani, Nadeau, Craven, Maloney, and Pitts. Teachers' names above the classroom doors also had an international representation. A parent newsletter, *The Family Bulletin*, advertised evening "Adult English Classes" in the school's Family Resource Center. A large bulletin board recognized the school's volunteers and included snapshots of the parents who volunteered in the building in a variety of capacities. The photographs included parents from African-American, Puerto Rican, Laotian, Vietnamese, Mexican as well as Anglo-Saxon and European descent. All who entered the main office read the school's mission statement proudly on display. It included a sentence which read, "Through a supportive, caring environment, we stress a respect for the individual and community by celebrating our cultural richness and promoting cooperation and concern for others." It was apparent that parents and educators in this building recognized the varied cultural backgrounds of the students and celebrated their differences.

Maple Grove Elementary School houses two classrooms of each grade level, although the numbers vary from year to year depending on enrollment. In addition to classroom teachers, there are support staff members such as social workers, a school psychologist, a full-time librarian, ESL Program teachers, family resource center staff members, compensatory education program staff, special education personnel, and itinerant music and art teachers. One full-time administrator oversees the school staff of 52 which includes 18 classroom teachers.

## The Classroom

As I entered Judy Wood's fourth grade classroom, I immediately noticed the stage along the wall. A large black curtain hung from the ceiling behind a raised, carpeted platform. To the right of the central stage was a large antique trunk filled with costumes with a potted tree in the background. Surrounding the trunk were large pillows. A guitar leaned against the trunk, and a coat rack stood behind it. From this coat rack hung a collection of hats from different countries—a Mexican sombrero, a cowboy hat from Brazil, and several other international styles.

A portable chalkboard displayed a large brainstorming web with the state's name directly in the center of the web. Phrases such as "famous people," "places of interest," "land forms," "climate," and "natural resources" sprouted from the center of the web. To the left of the platform stood a red, wooden puppet stage with a large pile of puppets next to it.

Student desks were clustered together along the far ends of the classroom, leaving the entire middle of the room free of furniture. This large open space was where the class conducted its morning meetings, and Judy Wood did much of her teaching.

Along the counter were several learning centers. There was a "Listening Center" which held cassette tapes, a tape recorder, maracas, bongos, drums, a tambourine, plastic flutes, and a plastic clarinet. In the "Writing Center" were blank sheets of paper and writing materials, an "International Pen Pals" blotter, a calendar, shipping labels from the local post office, stationery, and an authentic metal mailbox. Along with writing materials was a "Where's Waldo?" book with many examples of postcards from around the world. Next to the writing center was an "Art Center" which included clay, magic markers, brushes, glue, Play-Dough, scissors, and books of wallpaper samples. Above this was a large student-designed world map filled with small figures of children from foreign countries.

Another wall was the home of "Readeroo," the kangaroo-mascot for the "Leap into Literature" program. The following poem served to explain the goal of the students' travel plans:

> If I could go anywhere,
> Here's what I'd do,
> I'd pop in the pouch of a kind kangaroo.
> I'd travel around for as long as I pleased.
> And learned to say "Thank you" in Kangerooese.
>
> Bobbi Katz

A "Computer Center" included one Macintosh computer with printer and was located along another wall. Available computer programs included those designed to teach typing, graphics, word processing, and thinking skills. A chalkboard with maps ran along the left wall of the classroom. A bookcase with a full set of encyclopedias stood in the corner.

A formal teacher's desk was absent in this classroom. Instead, Judy Wood managed her room from a small round table with four chairs. To the left of this table the teacher had a storage cupboard which served as her work station and was covered with books, instructional manuals, and supplies.

Throughout my visits, staff members commented about the exciting educational experiences happening in Judy's room. It was apparent that Judy Wood created an environment that was comfortable, child-oriented, and action-packed.

## Informants

I interacted with a variety of people in the course of gathering information about Judy Wood and her fourth grade classroom. Throughout the study, Judy's 22 fourth graders provided me with a wealth of information. The students were heterogeneously grouped and were from a variety of cultural backgrounds including Asian-American, African-American, Caucasian, and Hispanic. Several students had non-English speaking parents, and these students spoke English as a second language. One Laotian child spoke no English. A large number of students came from single-parent homes, and several lived with grandparents.

I conducted in-depth, one-on-one interviews with six high ability students in Judy Wood's class, three boys and three girls. These children were Caucasian, Black, and Hispanic and were representative of their multicultural peer group. The six students were from one and two-parent families of varying socioeconomic levels. Two of the children had been designated as at-risk and were involved in a special counseling program. The

school's counselor provided them with weekend camping excursions to learn interpersonal skills and benefit from group counseling sessions. All six of the youngsters were highly verbal and creative. One very active boy in the group had a short attention span and was easily distracted while another boy, an underachiever, was described as a young man who "will do as little as he can to get by." Judy Wood designated the six students as those she would recommend for involvement in a gifted and talented program should the school district reinstitute a program. I found the students to be open and direct in describing their school experiences.

Judy Wood, a woman in her late twenties, had been a teacher in Waverly Heights for five years. She completed her Bachelor's degree in elementary education at a small private college in Waverly Heights. In May she earned her Master's degree in special education from the same school. Judy shared her plans for pursuing a Doctoral degree at a major research university in the Midwest. She hopes to pursue a specialized program incorporating media and video technology in developing programs for special education populations. Her ideal professional position would be to work for Walt Disney World creating educational videotapes for special education students.

Darrell Greene, Judy's fourth grade teaching partner, was a gentleman with a calm, dignified style. This was his first year of teaching at Maple Grove. Prior to this teaching position, Darrell had taught in a parochial school in the Chicago area for seven years and in the public elementary schools of a nearby district for three years. Darrell and Judy did a great deal of team teaching; both enjoyed blending the differences in their instructional styles to better meet the needs of their students.

Also, I interviewed Nora Feldman early in the research study. As the curriculum specialist, she provided me with a wealth of information concerning the variety of curricular programs being developed for students. Nora's responsibilities included providing teachers with direction in implementing the district-wide curriculum, providing model lessons for teachers and students, locating community resource people to work with small groups of students, supervising testing as well as serving as the curriculum coordinator in reading for all Waverly Heights elementary schools.

The principal, Geneva Ross, was known as a dynamic educational leader. Ms. Ross had been in education for 25 years, and served as an administrator for the past 10 years. I seldom saw her behind her desk. Instead, she moved among the children and teachers throughout the day with great speed and excitement. Her cheerful laugh could be heard as she conversed with all who entered the building.

## Findings

Analysis of the data indicated that Judy Wood was a well trained professional who worked with other professionals as partners to provide her high ability students in her fourth grade class with an educational program that included curricular and instructional modifications and nurturance of their affective needs. This section will describe how Judy Wood provided this program.

### A Visionary

I found that Judy Wood's management techniques and special education training in individualization enabled her to provide students with sound educational programs.

Judy's principal described her as a visionary who had wonderful ideas, and could envision where she wanted her students to be at the completion of a unit, or the end of the academic year. The principal explained,

> Judy is well planned enough to know exactly what those kids are going to get, and what they are going to come out with. I think if you have your objectives set and you know exactly where you are going and how you are going to get there, it is part of an integrated classroom. Judy is a phenomenal teacher.

Darrell Greene, the other fourth grade teacher, also referred to Judy as a visionary who was able to see the whole picture. He described her as a teacher with goals and big dreams, a woman who felt comfortable letting go of traditional ways of doing things, and working out new ways of attacking a problem or presenting a concept. He explained some techniques that he learned from her.

> She taught me to always do a KWL with the child. What I Know. What I Want to know, and Why I want to Learn it. So if we are doing a unit on dinosaurs, the first thing I did was ask, "What does this child know about dinosaurs?" Then, "What does this child want to know about dinosaurs?" And finally, "What has he learned about dinosaurs?". . . . You have to look at the background knowledge that the child brings into the classroom. You have to find out what information they know coming in.

Judy's special education training prepared her to look at children individually. Darrell explained, "She's been trained to look at each child and will prepare a program or lesson for that child."

In my interview with Judy, she explained how she planned her lessons.

> Basically, the way I plan my lessons is to look at my units of study and try to figure out what I want my outcomes to be. Then I break these outcomes down so that they are reachable for everyone to obtain the goal. Then I modify. I task-analyze for the students who are more remedial, or I will enrich for the kids at the other end of the spectrum. I'll add on steps to enrich for the more gifted students.

I had her explain task-analyze further. She referred to a biographical research project assigned to her students.

> I took the whole research process, and I broke it down into steps. I think I came up with fourteen steps that everyone had to accomplish. I had them start out with a basic beginning, getting background knowledge of what they knew about their famous person, what they wanted to know, and eventually, what they have learned about that person. We basically guided them through the whole process of how to obtain their goal.

Judy described how her special education training had helped her develop classroom management strategies.

> Having the appropriate behavioral management techniques is crucial in a class in which you have a multitude of disabilities, needs, and academic ability levels. You need to have good management techniques. Implementing an environment like this means having the structure and management to do it. . . . The task analysis—knowing how to break down a goal and objective and looking at a unit as a whole

> versus a lesson by lesson approach, being able to evaluate and analyze the students and what they need—all this is so important.

Judy had been trained to be a teacher who considered individual children rather than the whole group of students. This training helped her to differentiate curriculum for students of varied abilities. This training helped her to differentiate curriculum for high ability students.

### Strong Concern for Affective Needs

Judy Wood was aware of the importance of considering the affective needs of children as well as developing their cognitive abilities. She explained to me how many students came from difficult home situations. They craved attention, and her praise was constant. During a class discussion in literature, she commented, "Great answer! Mike; you would have been a perfect candidate to live in the 1800s!" In a language arts activity she said, "Mike Johnson, you're a very bright young man. Why do you think you would want to change this sentence?" "Laura Jefferson, I think you're a natural poet!" After a student's oral presentation, she commented, "Very impressive answer. Consider a career in broadcasting." She smiled often as she noted how pleased she was with them with expressions such as "Superb!" "Good Job!" and "Excellent Idea!" In a quiet conference with a student having problems she said, "Holly, I didn't want to embarrass you in front of Mrs. Bancroft, but Holly, what's going on?"

Judy incorporated affective development in many curricular areas as well. She mentioned the use of videotaping as a way of building self-esteem:

> They [students] are fascinated with the whole concept of video, television, and seeing themselves on TV. I use it to build self-esteem. We will practice giving speeches, and then we will play it back, and the kids will critique each other. They really enjoy it. It makes them feel important.

With cooperative learning strategies, Judy felt that many of her students had made substantial gains in learning to get along with others, work in groups, and become more considerate of others' feelings. One high ability student from an economically disadvantaged background had shown real growth in this area.

Judy modeled self-disclosure with her students by sharing aspects of her private life. Students were intrigued with her graduation ceremony and the family party that followed when she received her Master's degree. Also, Judy was known to bring her family into the classroom. Her brother had chaperoned class field trips, a younger sister had visited the class, and her father had read to the class several times.

Judy's success with affective development was apparent in the behavior of her students. There were numerous examples of how gentle the students were with each other. One student described how she had requested to be placed in Judy's class after experiencing difficulties with children in another classroom. She had pursued the change with the building principal, and after several parent-teacher-administrator conferences, Anne switched classes. She commented, "It's very comfortable in here, because if you do something wrong or you forget something, the kids don't get hyper." Anne went on to explain that this respect for individual differences was due to the fact that their teacher modeled a respect for students.

## Family as Priority

Maple Grove School appeared to be a place where cooperation and respect for family was nurtured. Upon entering the building, I saw a bulletin board recognizing the efforts of the school's volunteers and noticed a "Family Resource Center" there. This was an environment with a strong sense of community where people were valued.

I discussed this family-like environment with Geneva Ross, the principal. She explained, "The nice thing about the school is it really is like a little United Nations. . . . There really is a good appreciation [of different cultures]. We really don't have problems with parents or kids in any kind of racial or cultural conflicts." Ms. Ross has worked hard to bring the community into the school and was delighted with the number of adult volunteers. Her staff had been successful in bringing many senior citizens into their classrooms. The rationale was again family-related.

> We try to get a lot of seniors, because a lot of the kids don't have their grandparents at home. It is just wonderful. We get as many volunteers as possible. We can use everybody . . . sometimes a parent volunteer, or a senior citizen, or a mentor can make a difference with that child that we can't make.

Realizing the needs of her population, Ms. Ross and a group of community members designed a plan to better meet the needs of the school's families. Through cooperative efforts with a community social service agency called "The Bridge," and a three-year grant of $300,000 from the Kellogg Company, the school became the home of a Family Resource Center. The focus of the center is to draw families together, encourage people in the community into the school, and make the school more accessible to the community. Parents are provided with play groups for preschoolers, three family therapists who visit homes, group family therapy, parenting workshops, a full breakfast program, a "Clothes Closet" for children, and a homework center where students are provided guidance and homework strategies.

Teachers at Maple Grove Elementary School worked closely together in planning educational programs for students. A great deal of sharing of ideas and resources took place among the teachers. Darrell Greene described his experiences as a newcomer to the building. He and Judy Wood met a number of times throughout the summer before he started teaching at the school. They worked in planning their curriculum for the year and organized how they would team teach. He described how willing colleagues were to share resources. He described experiences where he would be casually discussing a unit with colleagues, and before he knew it several teachers went into their classrooms and pulled materials they thought might be helpful to him. He described the faculty as "close knit with a strong sense of dedication" who did not mind early morning and late afternoon curriculum planning meetings. He compared his present experience with previous school districts. "Here, you talk to your co-workers and say, 'How do you approach this?' I'm trying to think of a new way to do this." According to Darrell, there were no closed classrooms at Maple Grove. People referred to the dedication of the staff and provided examples of professionals going "above and beyond" to meet the needs of children. For example, Judy Wood referred to a school counselor who took her students on outdoor weekend trips. Several boys benefited from these experiences with an older, male role model.

The priority of family and community was reflected in staff decision making. Staff members had an important voice in how things were done in the school. There were few decisions that the principal made herself. Most decision making was carried out in "group planning teams" that met weekly with self-designed agendas. The principal explained,

"The teachers in this building want to have a say in what goes on, and they will be responsible for it." Judy reinforced this. "There is a lot of teacher input in decision making and a lot of group work in arriving at decisions."

## Classroom Life

Many adults visited Ms. Wood's classroom. One morning I counted myself as one of five adults in the classroom. There was Judy, Mrs. Ortiz, a student teacher from a local college, the visiting supervisor from the college, and myself. The children did not appear to notice the number of adults in the room.

Mrs. Ortiz, an elderly Puerto Rican woman, spent time in Judy's classroom once a week working directly with small groups of students. She had been working as a volunteer with these students for three years (since they were in second grade). A comfortable rapport appeared to exist between her and the students. Her role was that of instructional support. I observed her conducting small group discussions with students and noticed how adept she was at keeping one particularly bright young man on task. The boy was very verbal, physically active, and although he appeared to have a short attention span, with her guidance he remained on task. Judy explained, "I want to expose the students to an elderly person, so they can see that the elderly have a lot of ability. I want them to understand that age does not matter and to develop a sense of respect."

Mrs. Powell, a middle aged, blind woman and her seeing eye dog also visited the classroom weekly. Two high ability students read orally to Mrs. Powell each week. She would appear at the classroom door with her dog, and the young girls who worked with her would quietly leave the room for the library where they spent time together reading quality literature. The girls had been reading to Mrs. Powell for two years. Judy Wood explained that this relationship provided an enrichment experience for two gifted students and provided the entire class with exposure to people with disabilities.

In addition to having many adults in the classroom, Judy Wood had a unique relationship with her students. The principal felt strongly that a two-year relationship allowed for a genuine sense of trust to be established between the teacher, the children, and the children's families. Judy Wood had established such a wonderful rapport with her students, that she was encouraged to follow them to fourth grade for another year. As principal, Ms. Ross had seen much improvement in students' skill development and self-esteem, and she felt another year with Judy Wood would provide the children with consistency and a sense of security. She encouraged Judy to continue with them but did not push her. The decision was ultimately Judy's. Judy pointed out that this arrangement was not uncommon at Maple Grove Elementary School. She was not the first teacher to follow a class for a second year.

## The Mentors

Judy Wood developed a new mentorship program by approaching one of her former professors about the possibility of establishing a partnership. The professor was teaching a new course entitled "Instructional Strategies" and wanted to provide Master's level, education students with a practicum experience. As she was familiar with Judy's classroom, she felt confident that students would have a positive experience at Maple Grove Elementary School. Working in partnership, the two educators were successful in matching 18 graduate students with Judy's and Darrell's fourth graders.

Judy Wood and Darrell Greene were required by state guidelines to teach state history in fourth grade. They decided to use the 18 mentors to assist students in a study of

historical figures. They referred to this curriculum experience as "The Famous People Project." The graduate students met with Judy Wood individually to discuss the project. She interviewed them about their educational backgrounds, previous experiences, and personality style before pairing them with two or three fourth grade students. Several mentors requested the chance to work with specific types of students such as learning disabled, bilingual, or gifted.

After the matching process, students selected a famous person from history to research. Judy provided the students and mentors with guidelines to follow. Each student received a research journal with 14 steps which included a KWL Chart (Know, Want to Know, Learn), a record of resources, procedures for note taking, steps to writing rough drafts and finished drafts, and other helpful organizational strategies. Judy's goal for this project was to produce a dramatic presentation in June. Students would be dressed as their famous figure and present a theatrical portrayal by sharing biographical information that they had researched with their mentors.

Mentors met with the students twice a week for a weekly total of two to four hours. They worked quietly with students in the library. They took students to sites throughout the state that were associated with the lives of the historical figures they were investigating. The mentorships lasted a semester and proved to be a rich experience for all involved.

Mary, a mentor, had been involved in a gifted program as a child and specifically asked to work with high ability students. She worked with two young girls who were researching the life of Mark Twain. Mary designed her weekly lesson plans on small group research according to a model her own G/T resource teacher had used. I observed Mary working with her two students as they cut and stapled sentence strips filled with historical information on Twain's life. The conversation between Mary and the two young girls included advanced vocabulary, higher level questions, and encouraging comments. As they examined a paragraph together, Mary asked, "Do you think this sentence is redundant?" She later pointed out, "Mark Twain's daughter suffered from spinal meningitis. Can you explain that disease?" She provided praise with comments such as, " Good reasoning. I'm glad you pointed that out to me. It is a pointless fact. I didn't see that. I agree with you. You're quite the little editorial mistress there! Very good!"

Another mentor, John, was a vivacious, easygoing young man who worked with three very bright, energetic boys. John did not have an education background. He was a business administration major, yet he appeared to be a "natural" in working with young people. A student was seated at the computer composing a finished draft of his biography of Charles Goodyear. John stood behind him and encouraged the boy with comments such as, "That sentence really has improved, but what have you forgotten to place at the end?" When the student discovered he had overlooked a question mark and corrected himself, John ruffled his hair and cheered, "Alright Mike!"

The relationships between the students and their mentors became very important, and Judy Wood was comfortable with the mentor relationships that her students were developing. I questioned her about "letting go" of her relationships with students and sharing them with other adults. She explained,

> You often get the feeling as a teacher that you need to be with them, you need to guide them through every paper, you need to be in control of what they are doing. . . . Some of them have a lot of emotional needs, really letting go, and letting them hook onto someone who is going to spend a lot of time, just one on one, or one on two, and really develop a special relationship with that adult from outside the classroom [was healthy]. . . . It gave them a break away from me, the

> person who is demanding and has requirements for them every day. It gave them a treat, being able to work with someone else in a quiet atmosphere and really be guided at their own level.

Judy Wood and Darrell Greene begin this mentor project in the middle of the school year, thus allowing students time to become accustomed to their teachers and the classroom routine. Throughout the program, Judy kept in touch with the mentors concerning problem situations or concerns about individual students. She coached them from the sidelines, provided helpful advice, and allowed the mentors to follow through with consequences or rewards. The children understood they were responsible to their mentors directly.

Judy used a log with students, mentors, and parents. The research log provided space for parent signatures as the youngsters progressed through the project with their mentors. Judy found that her high ability students were so motivated to work on this project that the research log seemed to get in their way. Students did not need to be monitored by their parents, so she discontinued requiring parent signatures. These youngsters finished their class work quickly and asked for time to work on their research to prepare for the next time they would be meeting with their mentors. With this group, much less guidance was required.

The mentorships provided benefits for all involved. Working with a graduate student in a one-on-one situation allowed the students to develop a particular learning style and receive individualized training in conducting their research. Mary found that she had to provide her two protégés with advanced level experiences, training, and resources. She started her students researching in the school library and discovered that they quickly devoured all information on Mark Twain. Encyclopedias were just a beginning for these two young researchers. They explored other public libraries; Mary brought in additional materials from her hometown library. She discovered the girls became very excited with photographic plates on Mark Twain and his family.

Mary found that the girls needed direction in research techniques and trained them in note taking, paraphrasing, the importance of avoiding plagiarism, writing bibliographies, and organizing and editing their writing. She trained the girls to create their text by writing all the interesting facts they had discovered about Mark Twain. She then had the girls cut their facts into sentence strips and together, they agreed on how their information should be organized. With the help of a stapler, the young women created their biography of Twain by stapling together their sentence strips in such a way that their text was smooth flowing. Through the use of sentence strips, she was able to help the young authors present their information clearly. She described this process:

> I think they found it fun to do because after all the writing process was over, you have to put it all together with the stapler and it was fun. You got to order it. There was a fun side to everything we did. It wasn't all boring, looking in the books and writing down information. I hate doing note cards myself. That's why I came up with the sentence strips.

The mentors saw changes in the students while working with them for several months. Mary left the mentorship experience with an understanding that children can become "responsible for their own learning." She realized that a teacher's responsibility was to provide children with opportunities for taking charge of their education. "I've learned that kids have to pick up the ball." Mary was impressed with Judy Wood and pointed out that she " . . . treats her students as if they were little adults, without too much pressure and enough responsibility. She brings her students to a professional level of

learning." Another mentor described a scene she had observed between one high ability student and her mentor.

> Veronica and I were friends, and I saw her work with Anne who is a particularly difficult child. Anne's face would brighten up when she saw her. I think the mentorship program was an excellent idea. It was probably even more productive for a student like Anne or some of the other kids in the class . . . just to know there was someone out there who was there for them was so important. It motivated them, gave them something to look forward to.

## Selecting From a Smorgasbord of Strategies

Judy Wood developed a broad repertoire of instructional strategies that she used daily with her students. A large banner encircled Judy's room and ended in a cluster of stars and a caption which read, "Let Your Talents Shine." The stars were part of a display that explained the *Talents Unlimited* model. Judy Wood received training in this model which was designed to help students with creative thinking, planning, decision making, forecasting, and communicating their ideas. All teachers at the school had been trained in this approach through the former gifted and talented program coordinator. Ms. Ross, the principal, explained that some teachers bought into this approach wholeheartedly and used it daily, while others incorporated the training more sporadically. Judy Wood used it through her questioning strategies, projects, and creative writing assignments.

Judy's questions were consistently designed to have students analyze, synthesize, and evaluate information. In an integrated social studies lesson, the following questions were asked: "Can you imagine what would happen if you were experiencing a blizzard in 1778?" and "What might have happened if you were home alone in a blizzard in 1778?" In a writing activity, Judy asked, "If this character has sardines flipping inside of him, what will he do? He has swallowed a can of sardines. How do you think he feels?" In a lesson involving a class time capsule Judy asked, "What kind of information would a kid in the year 2010 want to know about?" and "Imagine if we were to open a time capsule from 200 years ago. The *Times*was established in 1764. What might we have read about in the paper back then?" In a discussion about current events, Judy asked, "Why would they build a Walt Disney World in Paris?" Judy explained that higher level questioning strategies not only challenge her high ability students, but keep students with short attention spans more focused. Higher level questions served as "grabbers" in keeping the students involved in any class discussion.

Also, I noted the use of cooperative learning strategies in Judy's classroom. The model of cooperative learning developed by Johnson and Johnson was a mandatory inservice topic the previous year. All elementary school teachers in the district received three days of training from a certified cooperative learning trainer. Judy explained how she used this strategy.

> My whole classroom curriculum is set up according to that model. My activities are basically cooperative learning activities. I incorporate this with *Talents.* Before I really individualize, I try to get students to work together first without assuming that they have the skills. Many them lack the social skills and cooperative skills to work in a group. It is important that they understand how to cooperate. I have had students who lack the socialization skills and may have been embarrassed because they didn't have the ability to keep up, and I have had the other extreme—the gifted child who does not have the patience to work with someone of lesser ability. . . . After working with them throughout the year, it is unbelievable the progress they

have made in working with each other. They have gone from groups of two to groups of five where they are really working together.

Integrated curriculum was another strategy Judy Wood incorporated in her teaching. She selected six major themes for the academic year and designed her integrated curriculum around these themes. Reading lessons about frontier life (by Laura Ingalls Wilder) would be connected with state history of the same time period in social studies later in the day. Solving mysteries was one theme for part of the year. Judy selected a lesson from the literature-based reading series dealing with a young female character who was working as a detective. Students analyzed important clues in attempting to solve the crime.

Judy also created a classroom time capsule. The students designed original clues to accompany the contents of the time capsule. In social studies Judy asked what a time capsule from colonial times might have included. Students were also involved in writing their own mysteries complete with clues for other students to solve. When the class studied food chains and webs in science, the students would write a puppet show on this topic in language arts time to share with primary grade classrooms. Through this thematic approach Judy Wood integrated reading, creative writing, social studies and science together. The high ability students enjoyed the integrated approach. One young boy explained, "It helps me because if you know this, then you can learn a little more on this; it's blended together."

Curriculum compacting was another strategy used in Judy Wood's classroom. Compacting is a strategy whereby a classroom teacher documents curricular material that a child has mastered and replaces it with challenging educational experiences. Some curriculum compacting was apparent in Judy Wood's approach to providing an appropriate educational program for high ability students. In observing students in math, I noted one gifted boy was working alone on problems from another part of the math textbook. When I questioned him, he explained that Ms. Wood had eliminated a portion of the math curriculum because she saw that it was too easy for him. When finished, he worked at the computer on his Famous People project or with math related computer software programs. Another high ability student, a voracious reader, was not required to read the *Weekly Reader*. She found the *Weekly Reader* "boring and too easy." Instead she read children's literature selected from the school library. The same child was allowed to work at her own pace in math. When she was working on "division in the thousands," other students were working on "division in the hundreds."

Judy Wood used a variety of techniques and strategies. Learning activities seldom centered around a textbook. In a math lesson on fractions the students were seated in the center of the room with their lap desks. They watched as their teacher displayed a variety of different colored socks from a large plastic bag. She conducted her questioning from the circle and recorded their answers on the classroom easel. "What fractions of the socks in front of you are equal and equivalent?" "How many groups of socks are striped? "What's another fraction that means the same thing?" "Is there another way to take all these socks and divide them into groups?" On another day, Judy explained a division problem at the easel. The number 417 was to be divided by 3. She asked, "What's my code?" and the students chanted loudly, "Don't miss school!" She wrote on the easel, "D= divide, M= multiply, and S=subtract. The students then continued to solve the problem at the lap desks using the DMS approach. Action-packed strategies provided students with a challenging learning experience.

Judy Wood's training in instructional media was part of her teaching repertoire. She designed and developed films and videotapes in her summer work at a local college

media center. She provides audio-visual learning experiences for her students and explained,

> I enjoy taking communications and applying it in all academic areas. For example, you can take any curriculum area and integrate video into it. I enjoy teaching activities that stress communication in both written and verbal forms and have students developing films, puppet shows, or plays.

Judy explained that students gained more confidence in themselves as they became more comfortable with media. She felt this training was invaluable.

> [In developing videotapes] the types of skills that I am incorporating are writing skills, (i.e., writing narrations), teaching students how to use the equipment, incorporating oral communication skills (i.e., speaking into a microphone, speaking before an audience, projecting your voice.). All of those skills transfer into how to present an oral report, how to give a speech, how you should present yourself before a group. This technique is giving the kids a foundation in communications.

Along with the strategies described above, I also observed brainstorming sessions, training in SQ3R (a critical reading technique), enrichment activities, flexible student grouping, and multicultural education. Judy Wood provided her students with a smorgasbord of strategies; her enthusiastic students with hearty appetites for learning appeared to feast on what was served in Room 14 at Maple Grove School.

## Themes

The following section discusses the four major themes which related to providing a high quality educational program for bright youngsters at Maple Grove Elementary School. The three major themes emerging from the data were professionalism, personal characteristics, partnerships, and professional preparation.

### The Teacher as a Professional

Judy Wood was selected for this study because of her strong reputation for meeting the individual needs of high ability students in her fourth grade classroom. She was recommended by other professionals in her school district. It is not surprising that such an outstanding educator would be recognized early in her teaching career. In only five years Judy Wood has become a professional who is respected by her peers, her superiors, her students, and the Waverly Heights community at large.

She perceives every educational program as an interesting challenge which she tackles with enthusiasm. As a well trained educator, she approaches her task with dedication and has mastered the art of teaching with professional sophistication. Her sense of professionalism continues to allow her to learn from all those around her. Though she has a great deal to offer other teachers, she always considers the approaches of her colleagues at Maple Grove Elementary School. Her professional approach in partnership with her peers is an inspiration to her colleagues.

One reason Judy Wood effectively uses differentiated teaching strategies is her preparation for teaching. Judy's educational training prepared her as a professional; she conducts herself as a teacher with a sense of professionalism. She has received quality educational training in which she learned early in her career to consider each child as an

individual. She continues to look at each student in her classroom this way. By continuing her training in special education, she challenges bright youngsters and provides for the needs of less able students. Her graduate level coursework in individualized learning assists her in designing appropriate programs for high ability students. She applies what she is learning in her university courses to her classroom situation. She experiments with pedagogical methods and discovers what works best for her students. The Waverly Heights school district provides professional support. Her school district has provided her with ample opportunities to extend her education and keep abreast of current educational techniques and strategies such as the *Talents Unlimited* teacher training program, workshops on the cooperative learning approach, curriculum compacting, and training in whole language and the writing process.

Judy Wood is a master teacher who creates an environment where children learn in their preferred learning style. She experiments with many ideas to create an environment where students will succeed. Her educational background has provided her with a repertoire of instructional strategies and curricular differentiation techniques to meet the needs of high ability students in her classroom. She succeeds in designing an exciting, yet comfortable classroom environment which takes into account the cognitive and psycho-social needs of her multicultural, at-risk fourth grade students.

## Personal Characteristics

Judy Wood has the personal qualities needed to meet the social and emotional needs of gifted students as well as other children in her classroom. She is a young woman with a deep sense of concern for her students and respects them. She is determined that the eight hours they spend with her each day is time spent in a supportive environment where their individual differences will be appreciated and celebrated. Judy Wood believes that the socioeconomic and cultural backgrounds should not interfere in students reaching their highest potential. She believes that children from Maple Grove Elementary School have a great deal to offer, and she is proud of their accomplishments.

Judy Wood understands that bright children need to be intellectually challenged, and she realizes that their social and emotional needs are equally important. Bright children have special social and emotional needs, such as the need to clearly understand troublesome moral and ethical issues facing society. Through open class discussions and debates, Judy's brightest students are provided opportunities to address their personal concerns. The high ability students who may feel different because of their intellectual precocity are able to feel comfortable and be themselves in Judy's room where diversity is celebrated and feelings are respected in a family-like environment. The high ability underachiever is able to reverse his pattern of low productivity when Judy provides a mentor who serves as a friend, role model, and motivator. Two young girls with heightened sensitivity are able to channel their sensitive feelings in a positive manner through their relationship with a blind woman and her seeing-eye dog. Through Judy Wood's thoughtfully planned and individualized approach, each high ability student has his or her affective needs met.

## Partnerships

Professional partnerships contribute to Judy Wood's effective use of differentiated teaching strategies. She brings the Waverly Heights community into her fourth grade classroom, and her students benefit greatly from this approach. Judy has worked hard to find community resource people who can assist her in meeting the individual needs of high ability students. She works in partnership with community members. To enter a classroom and find a woman and her seeing eye dog, numerous student teachers, a classroom grandmother, and 18 mentors from a nearby college says a great deal about Ms.

Wood's efforts at partnership. Her professional partnerships includes her peers. She constantly exchanges ideas with colleagues to benefit all children.

## Summary Statement

Judy Wood is a professional educator who establishes challenging goals for her students and, in doing so, she creates a high goal for herself. She looks upon each educational program she prepares as an intellectual challenge which she strives to meet. With dedication and a strong sense of professionalism, she works in partnership with her community and colleagues to provide her students with the best educational program possible.

She is well prepared as a teacher and strives to continuously improve as a professional for she remains abreast of current pedagogy through graduate level coursework and inservice training.

Judy Wood designs an exciting and a comfortable classroom environment that enables her to better meet the cognitive and psychosocial needs of her multicultural, at-risk fourth graders. Judy Wood displays a deep sense of caring and concern for her students and she respects them as individuals. She models respect for individual differences, and her students recognize this behavior and follow her example in their classroom.

By establishing high goals for her students, creating individualized educational programs, working through partnerships to provide the programs and creating a nurturing environment where children can learn to appreciate individual differences, Judy Wood is able to meet the needs of high-ability youth.

## Methodological Notes

The purpose of this study was to investigate the practices being used to effectively meet the educational needs of high ability students in Judy Wood's fourth grade classroom. An ethnographic approach was used to investigate the nature of the students, the teacher, and classroom events. I investigated the culture of the classroom environment. To describe this culture, I conducted interviews and recorded field notes in the classroom, in the library, the teachers' lounge, at student rehearsals, in the corridors, at special school-wide programs, and on the school playground. I was a non-participant observer while documenting events.

The study focused on several key people, namely—Judy Wood, her students, six high ability students in her class, a fourth grade colleague, the principal, a student teaching supervisor from a local college, several mentors working with the students, parent volunteers, a curriculum supervisor, and several of the students' grandparents who occasionally visited the classroom. Also, these individuals provided me access to school records, examples of student products, school publications, and documents related to the study.

Over a four month period, I spent 17 days at Maple Grove Elementary School. The typical day began at 8:30 a.m. with opening exercises and ended at 3:00 p.m. with closing activities. Although most of the time was spent in Judy's classroom, I accompanied students to special classes, school-wide events in the auditorium, and lunch-recess. I also

visited classes of other faculty. I also observed certain students who were working with mentors and classroom volunteers.

Data were gathered from field notes and transcribed following each visit. Documents were collected and analyzed throughout the study. All interviews were tape recorded and transcribed verbatim. Information from the documents, transcribed field notes, and interviews were analyzed inductively for categories and for themes that addressed the research questions of the study.

# CHAPTER 7: Successful Practices at Adams School

Thomas Hays, Ph.D.

## Setting

Northtown, located in the northeastern section of a midwestern state, is positioned at the intersection of two major highways along the north fork of a large river. With a population of nearly 20,000, Northtown is located in the center of an agricultural area. Rolling prairie grasslands provide farmers with the rich soil necessary to grow corn and soy beans.

Northtown is two hours by car from a large metropolitan area; thus, the town serves as a commercial hub for the area. People from the smaller towns close by use Northtown as a shopping and cultural center. Most of the population is primarily employed in the business of agriculture. There is some light industry here, but most of it is based on agriculture. Although the population is derived mostly from European ancestry, the local economy has attracted new Hispanic and Asian families. A brochure designed to attract visitors describes the people as, "hardworking, honest, and warmhearted" and urges visitors to "experience real down home hospitality and a whole lot more."

According to several state experts in the field of gifted education, the local school district has a good reputation for meeting the needs of these students in the regular classroom. Adams School, the focus of this study, is one of nine small elementary schools in the district. The term "neighborhood school" comes to mind as you approach Adams School, because most of the children are able to walk to school. The area surrounding Adams Schools is primarily residential with a commercial area along the highway. Houses in the vicinity are older and well established. Adams School is a modern, brick building. The interior design and the atmosphere give the visitor an impression of a friendly, yet very busy place.

Adams School has 14 classroom teachers, 7 special teachers, a nurse, and a principal. The school contains a gym, a teachers' room, a kitchen, a music room, a counselor's room, an ESL (English as a second Language) room, a computer room, an office, and classrooms. The interior of the school is decorated with student artwork and Challenge (Gifted Program) projects.

Adams School has been honored with an Award of Excellence by the State Association of Elementary School Principals. Also, it received the 1991 Governor's Award for "outstanding leadership on behalf of the young people of the state through innovation and effective school programs." Currently, the school is implementing a pilot program encompassing site-based management entitled Project STUDENTS (Site Teams Utilizing Decision Making Empowerment Needed to Succeed). STUDENTS is aided by an advisory committee made up of parents, teachers, and staff.

Northtown Public Schools fund a district-wide gifted program called the Challenge Program which consists of "a number of different opportunities that allow intellectually gifted and creatively talented students to experience a differentiated curriculum." The Challenge Program includes options such as Omnibus, Great Books, and accelerated math. Each school has a building facilitator(s) that is responsible for implementing the gifted program; the facilitator is free to choose any program option for their school(s). Building

facilitators are full time classroom teachers who are provided with substitute teachers in order to work with gifted students. The programming options and time available for students varies from school to school. In addition to the school based programs, the school district's central office holds "Challenge Olympics," a problem solving activity, every Wednesday for selected elementary students.

### Informants

Nearly all the teachers and staff members of Adams School were interviewed for this study. Several teachers were interviewed many times. Nearly all teachers were observed at least once; several were observed many times. Students and parents were interviewed as well as central office and building administrators. Building facilitators and administrators from other schools were interviewed and observed. A total of 17 interviews and 18 classroom observations were conducted over a three-month period.

## Findings

### Differentiation Techniques and Strategies

What kind of instructional strategies or differentiation techniques were used by classroom teachers with gifted students in Northtown's Adams School? Classroom observation and interviews with teachers, administrators, students, parents, and community members were conducted in order to answer the above question. After the data were coded and analyzed, results indicated that the teachers of Adams School used two types of differentiation techniques: curriculum modifications and instructional strategies.

### Curriculum Modifications

The teachers at Adams School employ a number of strategies designed to meet the learning needs of gifted students in the regular classroom. These include modifications in the regular curriculum for students who can work at a much faster pace or who have the ability or interest to pursue a topic in greater depth.

### Enrichment

At Adams School, enrichment is an educational experience in the regular classroom that supplements the established curriculum. It is planned with the students' abilities, interests, and needs in mind. Types of enrichment are short-term, such as a complicated puzzle, or long-term, such as a unit on acid rain. One classroom teacher summarized the general approach to enrichment activities in the following way:

> We didn't accelerate, we enriched. We gave them opportunities. We got help from the building facilitator. We use higher level thinking, questions, and centers. The students go ahead and create on their own. We used brainstorming, Venn diagrams, T Charts, and attribute listing. We have had units on graphing, tangrams, problem solving, different kinds of money problems, math rods, and manipulative centers. . . . Everything is hands on. We also take field trips to the public library, and we have a business partner (the radio station), so we have had a field trip to the radio station when we studied communications as a theme. Every unit has a theme. Usually our field trips come out of our units. We have speakers talk about certain aspects of our units.

Another teacher said:

> We do enrichment in math. Gifted kids are good problem solvers. We expect them to try it out. In science and social studies we do essay questions that can be expanded on.

Several sixth grade students were asked to recall enrichment experiences from their years at Adams School. They remembered a unit on Japan, a project on hurricanes, writing and producing a play, writing books, and various Omnibus Units (commercially prepared curricular units). Some students spoke fondly about participating in academic competitions such as Challenge Olympics, a problem-solving competition sponsored by the Northtown School District.

## Curriculum Compacting

Curriculum compacting, while not used by all teachers, has gained wide acceptance at Adams. The teachers viewed curriculum compacting (Renzulli, Smith, & Reis, 1982) as pretesting students to determine what knowledge or skills they have mastered, then documenting that mastery in order to create time for enrichment or acceleration activities.

The district's gifted program administrator said that the teachers at Adams School compacted the curriculum. Interview and observation data as well as examination of "compactors" demonstrated that classroom teachers are compacting mainly in math and spelling. The language arts and reading curriculum are compacted to a lesser degree. Two teachers shared their views on compacting.

> In math I have a wide range of children. I couldn't teach them all together. I gave a pretest, and if they scored 90% or above, I compacted every chapter. Out of the 60 students, 32 of the 60 were compacted out.

> I really like it (compacting); it keeps the kids motivated, but some kids never take the option. In spelling and math and science we are compacting. We let them choose. In language arts we are doing whole language. We have a scope and sequence; we try and pretest them out of the skills.

After the curriculum has been compacted, what do students do with the time that has been created? The interview data indicated that students were involved in research projects, enrichment, acceleration, advanced level content, and learning centers.

## Thematic Units

Students in the primary grades are often taught with thematic units. These units of instruction contained broad based themes and included assignments and projects for all ability levels. In addition to containing a range of activities, the units allow for student choice of tasks based on interest. The thematic units observed in the regular classroom included the circus, plants, units in literature, transportation, communication, monsters, and ghosts. The building facilitator used thematic units when working with gifted students.

## Learning Centers

Primary teachers at Adams used "centers" in conjunction with thematic units to help differentiate curriculum for bright students in the regular classroom. The centers, based on a general theme, offered choice based on interest, activities geared to a wide variety of

ability levels, and an opportunity for independent learning. In several classrooms, science and social studies were entirely taught through learning centers. The following field-note describes the way that centers work in the classrooms.

> The students are working in centers. The setting is a large classroom with students working in groups of three. In one corner there is an author's chair with the words, "I have a story to tell," near it. A section of the room has been walled off with book shelves in order to create a place for children to read. Bean bag chairs are placed there for student choice while reading (in that center). There are eight centers set up around the room. One is a listening center, and one is a writing center. Students are constructing with paper in the spelling center. Other centers are four skill building centers and an art center. . . . The students are working in groups and are task-oriented and busy completing the center activities. After finishing a center activity, the students hand in their assignments on a tray on the teacher's desk. . . . The students use binder-type notebooks for spelling, reaction to literature, and writing stories. The listening center also has a binder notebook for student use. . . . There is another adult in the class—a paraprofessional helping all the children.

### Advanced Level Products

Teachers at Adams School encourage students to create products that require more thought and planning than the usual textbook questions or classroom worksheet assignments. The goal of this type of product development is to make the students "producers of knowledge;" instead of operating in the role of consumer (Renzulli, 1977). Due to the influence of whole language instruction, the advanced level product that was encouraged most widely was the writing and illustrating of books. A place in the school library was reserved so that the students could read each other's books.

Other products were also observed. A fifth grade class made rain collectors for an acid rain project sponsored by the National Geographic Society. Another group of students prepared a script for a television show about pollution, solid waste management, and political action. They had plans to produce and videotape the show.

## Instructional Strategies

The teachers at Adams School identified several strategies that they used in the regular classroom to differentiate the curriculum for gifted students. These included higher order thinking skills, student choice and interest, ability grouping, and cooperative learning.

### Higher Order Thinking Skills

Higher order thinking skills (HOTS) have been traditionally defined as thinking processes classified according to Bloom's Taxonomy (Bloom, 1956); the Adams' teachers define higher order thinking skills in the same way. The thinking skills of synthesis seemed to be the most widely taught. Brainstorming was the most popular creative thinking activity. Students were comfortable with the process, and in most cases, followed the rules of the brainstorming strategy. Brainstormed lists were generated about various curricular topics. For example, a social studies lesson began with the students brainstorming a list of impressions of a particular geographic area under study. The class later compared and contrasted this region with other previously studied regions.

Literature often provided the context for higher order thinking skills. For example, after having read a book about a tree, one teacher said, "Let's brainstorm all the things a tree could give you." She followed up the activity with a letter writing project. Another teacher listed all the thinking skills she used in her centers. They included brainstorming, Venn diagrams, comparison charts, and attribute listing.

Literature discussions provide an opportunity for teachers to ask higher level questions as the following observation of a third grade reading teacher indicates:

> Does anyone have a different picture in his or her mind? Is it okay for all of us to have a different picture in our minds? I have a question. Do you think the main character liked herself? Explain that to me before you start your character sketch. How did Morgan feel about the job? Why did she think that? What happened? Why didn't she get to school on time?

A second grade teacher had a comparison chart at the front of the room. It was being used to focus a literature-based research project on mice. The chart had two labels, "What I know about mice," and "What I want to know about mice." Students had brainstormed a list of ideas under both headings. A sixth grade teacher encouraged her students to "give opinions and exaggerated points that lend themselves to higher level thinking." She was observed using this strategy during literature discussions.

A different example of higher order thinking was provided by the music teacher as she presented a visualization lesson. The goal was to get her first grade class to "really see" something. She asked a series of questions that encouraged them to look and see people and objects around the room with "new glasses." Then she gave the students time to draw plants that were scattered throughout the room. She said to the students:

> If you wanted to draw Ester, what would you do? (A student stands up.) What do you notice about her shoes? Look at her through your "new glasses" that you have. Look at someone's eyes. What do you see? What else do you see? When this lady, Lynne Cherry, wrote the book, she really sat down and looked. How would you describe your hair? What do you see here? (The teacher is holding a plant.) Describe this for me. Something else you want to add? Really look at this plant.

Teachers at Adams School used questioning strategies that elicited higher order thinking throughout their day. One teacher used a chart based on Bloom's Taxonomy to guide her questioning. A sixth grade teacher developed study guides for each unit, and the questions were "based on Bloom's levels of thinking." Another teacher wrote questions for thematic units in literature "according to Bloom and Williams' Cube." One teacher related how her questioning had improved. She said, "Well, I started out with literal questions, but I want questions beyond the literal."

### Student Choice and Interest

Teachers used the two related instructional strategies of student choice and student interest. These techniques allowed students to have some ownership in the way that they learn and the topics they study. The teachers in this school encouraged students choice in assignments and topics for research. In one class, students chose their own spelling words taken from academic areas. Another teacher allowed her students to make up their own questions to replace the textbook study guide and researched answers to their own questions.

There were other examples of student choice. For instance, teachers mentioned that students were allowed a choice of creative writing topics based on their interests. Another teachers gave students many options within the curricular framework, for example, "Do 4 out of 5 of these questions." A fifth grade teacher talked about choice and interest in her language arts class:

> We spend about three weeks on skill work, and (otherwise) the students are not grouped. The students write their own questions, pick their own vocabulary; they pick tougher ones than I do. This is to get away from knowledge level questions. I give lots of choice, and I bargain back and forth if they are interested in compacting. If I assign the work, they are not motivated. These contracts are on paper.

## Ability Grouping

Ability grouping is the practice of putting children into groups based on ability or achievement to provide planned differentiated curriculum and instruction. Kulik (1992) has identified several kinds of grouping practices that have traditionally been used in American education. They include grouping without curricular adjustment, grouping with curricular adjustment, grouping for acceleration, and grouping for enrichment.

The practice of ability grouping has been discouraged by some educators as being unresponsive to the needs of middle and low ability students. Although experts in gifted education have agreed that ability grouping is beneficial for gifted students, the State Department of Education and district administrators have encouraged the Adams teachers not to group by ability. As a result, the teachers did not practice ability grouping widely, but some forms of ability grouping (flexible grouping, cluster grouping) were used. For example, one teacher had two groups in math, and another teacher had six groups in spelling. An observation of a reading class found five groups meeting simultaneously and being taught by a teacher or a paraprofessional. Some teachers let their students select their own literature groups according to interest. One teacher used ability groups "somewhat," but advocated the use of flexible groups in reading.

Students now in junior and senior high remembered being rigidly grouped by ability. Some of their assignments were challenging and different. They remembered the number of books they read and the differentiated assignments and projects they completed as a group.

## Cooperative Learning

Cooperative learning was used by the teachers to meet the social needs of gifted children in the regular classroom. Cooperative learning is the practice of putting groups of children together in order to complete an assigned task. Each member of the group has an assigned a role to perform. The model of cooperative learning used at Adams places one low, one middle, and one high ability child in each group.

Because Adams School is a "cooperative learning school," this strategy was often mentioned as a means for meeting the social needs of gifted students in the regular classroom. Teachers emphasized that gifted children need to learn to get along with their peers and that cooperative learning helps meet that need. The use of cooperative learning is widespread at Adams. A teacher explained how she uses cooperative learning to meet the needs of gifted children in the regular classroom.

> What I am doing is having gifted kids use their knowledge, and they learn to relate. They will fight doing things cooperatively. A lot of stats say that gifted kids can't teach, but I have seen so many kids excel, and use it well. It is fun to watch them do what they do.

### Factors That Contributed to Differentiation

The following factors were identified as contributing to the teachers' use of effective practices: collaboration, administrative support, teacher training, community support, and a common philosophy.

## Collaboration

An examination of the data revealed a collaborative effort among classroom teachers and also between the classroom teachers and the gifted program.

Classroom Teacher Collaboration

A typical comment by a teacher with regard to collaboration was, "My co-worker and I work wonderfully together." Most of the collaboration was among teachers at the same grade level, but some collaboration occurred between grade levels. A community member, serving on a district-wide committee, said that Adams School has "more collaboration than any other school." One teacher commented, "We share all our centers and manipulative things. She (the other teacher) plans a unit and gives it to me and vice versa." Another teacher indicated that there was co-planning between teachers to meet the needs of the students and believes that, "We are lucky that we have the time to collaborate."

Two fourth grade teachers were observed working together in the library. This collaboration was made possible by a fifth grade teacher covering their classes. They shared the following:

> We are working on criteria for a math assessment test. This will give us an idea; it will pinpoint where the students are. We have a student teacher and Sarah (fifth grade) has one in fifth so we set aside the time. Pat (the principal) will get a substitute sometimes for something like this, if it is a part of the change.

Gifted Program and Teacher Collaboration

The building facilitators who serve as the gifted education specialists in each school have a good working relationship with the classroom teachers. Most of these facilitators are classroom teachers. Adams School is a site-based management school, and the principal and faculty make decisions about staffing.

Recently at Adams, the principal and staff have changed the schedule to give the facilitator more time to meet with teachers. The building facilitator said, "I have one half-day every 10 days, and after Easter, I have one day every 10 days to talk to teachers, collect materials, and pull things for them." A teacher said the facilitator for the intermediate grades at Adams School "is willing to work with you anytime by request. She will have more time to work with classroom teachers. I think that will be more satisfying for her and more helpful for the classroom teachers." The facilitator for the primary grades is seen by one teacher as "always pulling things for me, mostly enrichment materials. . . . If the children need something, they will talk to you about it." Building facilitators were frequently observed giving help and encouragement to classroom teachers. This occurred in the teacher's lounge, hallways, and classrooms.

## Administrative Support

Data from observations and interviews documented the existence of two types of administrative support.

Principal Support for Classroom Teachers

According to classroom teachers, the Adams School principal is supportive of their efforts to meet the needs of their students. When asked if they believed they are supported by the building principal, the teachers responded, "Yes, we certainly do. She shows interest and support. She suggests new approaches to try with children." Another teacher said, "Yes, Pat is for that (compacting). She always is wanting us to do that." Another typical response was, "Pat puts things into practice, and if she believes in something, she will get it done."

The principal also shows support for the gifted program as illustrated by the decision to allow more time for the building facilitator to work with classroom teachers. The building facilitator summarized the support as follows:

> We have principal support, and we are a showcase school. It is one of our goals to meet the needs of all children. It is written down. There is whole language. We are site-based, and we have quite a bit of staff development. We have support from a parent advisory council that is made up of parents and teachers, and the general public. It meets once a month.

Administrative Support/Budget

According to the majority of teachers at Adams School, funds are adequate and available to assist teachers with meeting the learning needs of their students. The principal and teachers have the advantage of site-based management as regards budgetary matters and make decisions as to how money is spent. For example, some teachers have not purchased workbooks and have used the money for trade books and manipulatives. The principal cautions that, "We can buy more things, but we can't buy more ideas: we have to be careful we are using it [money] productively." Even though the money was adequate to meet the needs of the students, some teachers would like additional funds.

## Teacher Training

The teachers of Adams School have received three types of gifted education training—training through university classes, through a regional education agency (Educational Service Unit), and workshops and conferences. Nearly all of the classroom teachers in Adams School have had some sort of training in gifted education.

University Training

Several teachers have taken classes in gifted education from colleges and universities in the area. A teacher said of her training: "I have one class in gifted [education] from a nearby college. I have Omnibus Training, and I have taught the high achiever group in summer school."

Educational Service Unit

The Educational Service Unit serving Northtown has provided inservice workshops on compacting and other gifted education topics. The entire staff of Adams School received inservice training on compacting. A booklet entitled "Differentiating Your Curriculum for Gifted and Talented," listing the components of compacting, was produced by the Service Unit consultant and handed out at inservice sessions.

Workshops

During interviews, nearly all teachers indicated that they attended several workshops on gifted education throughout their careers. One teacher remarked that she had no credit hours, but "I have taken a lot of workshops and have done a lot of reading."

## Philosophy and Beliefs

Interview data from Adams School indicated that the teachers share a common philosophy. All of the teachers were given the opportunity to support the philosophy or transfer to another school in the district. The teachers who chose to stay at Adams School signed a copy of the school philosophy.

Common Philosophy

The philosophy states that: "The school is a child-centered community that encourages trust, confidence, creativity, the joy of lifelong learning, and inspires each individual to be a contributing citizen of our world." In addition, the school and the teachers are committed to several principles such as "continuous progress learning, instruction that fits the child's learning style, instruction appropriate to the student's development, and the idea that learning can take place anywhere, not only when directed by the teacher."

The principal believes that differentiating for bright students in the classroom fits this philosophy. She stated:

> We are mutually committed to the principle that all kids can and will learn. We have a common philosophy. There is still room for diversity. By design, all teachers were asked to resign when this became a pilot school, a center for change. They all had a chance to go to another school if they wanted to. . . . I hope the mission statement is a guiding principle that provides the framework for people to provide multiple learning opportunities. I think in our district we try to provide learning that is appropriate for all kids . . . the whole building is based on continuous progress.

Personal Beliefs

Many of the teachers at Adams School believe that meeting the individual learning needs of their students is important. The following is a sample:

> My philosophy is child-centered, early childhood development, where you take the kids as far and teach them as much as you can. Push their strengths.
> I have a personal interest in each child. I was a building facilitator in another building. Gifted kids have been overlooked. It is my job, and I have been asked to do something with bright kids.

> It is my personal belief (to differentiate for gifted students), and it was not fun teaching the other way. I like to do different things. I want it to be fun. It is an evolutionary process, and I have been given the opportunity by the administration to do my best for the children. They support me 100%.

A parent said, "They [the teachers] have a real strong belief in their approach. The teachers are determined enough to make the changes work."

## The Gifted Program

How does the presence of a gifted education specialist and program for gifted students affect the instruction of gifted students with respect to instructional strategies,

materials, and training? According to the interview data, the gifted program at Adams School has not directly affected the instruction of gifted students in the regular classroom with respect to strategies, materials, or training. The gifted program is implemented by the building facilitator who conducts weekly pull-out classes; it was not designed to affect instruction in the regular classroom. Due to hard work and ability of the facilitator, however, some instruction is being affected. A summary of the influence of the gifted program and specialist on strategies, materials, and staff development follows.

### Strategies

The building facilitator models instructional strategies that differentiate curriculum for gifted students. For example, several teachers initiated compacting as a strategy due to the facilitator's leadership. Teachers commented that the facilitator provided the assistance and "mental support" needed to face the challenge of differentiating curriculum for gifted students. The principal indicated that such assistance will increase as time allotted for facilitating also increases.

### Materials

One of the building facilitator's jobs is to find and share materials with fellow classroom teachers. Teachers made comments such as, "The facilitator is always pulling things for me, mostly enrichment materials", and "The facilitator provides us with lots of materials."

### Training

Adams School's gifted program facilitator is not able to provide much training for the regular classroom teacher. The teachers have received training on their own from the Educational Service Unit as well as from local colleges and universities. Any training provided by the facilitator is informal training. They also train teachers by modeling differentiation techniques with their own students.

## Community Factors

What factors in the Northtown setting influence the education of gifted students? Data suggest evidence of community support and parental involvement in the Adams School.

### General Community Support

The community supports the school in its attempts to meet learning needs of students. The principal describes this as follows:

> The community was the biggest motivator in looking at how we treat kids. The families are middle to low income with traditional midwest values and work ethic. We looked at the kids and saw how they came to us, and they weren't at the entry point. The parents questioned us. Why are you doing this (changing)? It was good enough for me. The parents hadn't been in the school in a long time. When they were asked (to participate in the school), they were hesitant because they didn't want to be used. We were careful not to manipulate them. Now they are the strongest supporters. They became evangelists.

One community member summarized the general feeling in the community, stating that she was impressed with the school. "The community thinks the school has gone a

long way. Mrs. Hanson is not afraid to try new things. We are real pleased. Few of them [parents] ever leave.

### Parental Involvement

Parents are involved in the school in several ways. For example, eight parents serve on the school advisory committee for project STUDENTS (Site-based Teams Using Decision Making Empowerment Needed to Succeed)—a committee that plays a significant role in the life of the school.

Another sign of parental involvement is the fund raising conducted by the Parent Teachers Association. As the president explained, "There are enough materials, but we do fund raising, and we have lots of participation. We buy books and computer materials for the media center with the money."

## Themes

The data collected for this study indicated that Adams School addressed the needs of gifted students in several ways. Teachers used curriculum modification techniques of compacting, enrichment, thematic units, learning centers, and advanced level products. In addition, teachers reported the use of higher order thinking skills, student choice based on interest, cooperative learning, and ability grouping.

Teachers were supported in their efforts to meet the needs of gifted children by collaborating with each other and with the gifted specialist(s). The administration of Adams School was supportive of teachers' efforts and provided budgetary support for materials and inservice training. Staff development for teachers included university course work and educational service unit training; these were factors that assisted teachers in addressing the needs of gifted students. Curriculum differentiation for gifted students was aided by the philosophy or belief system of the teachers, as well as community support.

### Possible Implications for Gifted Education

The data from this site support several conclusions that may be helpful to an administrator, teacher, or parent who is interested in meeting the needs of rural gifted students in the regular classroom.

The findings indicate that the classroom teacher should be provided with staff development in gifted education. In general, the Adams teachers who were most successful with bright students were the ones with some training. Specifically, teachers need to identify gifted children, recognize their needs, and use the curriculum modifications and instructional strategies to differentiate the curriculum for them. This can be accomplished with university classes and district inservice training. The classroom teacher needs access to appropriate materials and training to implement these tasks.

In addition, the classroom teacher needs support and encouragement. The administration, the gifted education specialist, other teachers, and parents can provide this support. This type of support was evident at Adams School. A portion of the gifted education specialist's day should be spent consulting and collaborating with classroom teachers. The gifted education specialist shares materials, resources, and time with the classroom teacher. Also, time should be provided for classroom teachers to collaborate and plan for gifted students.

The school administrator fosters a common philosophy or belief system among the teachers for meeting the learning needs of "all children." The principal should emphasize that the concept of "all children" should involve gifted children. The principal should strive to foster a school climate that promotes high expectations. Teachers should have high expectations for all children, for other teachers in the school, and for student products and assignments.

The gifted program and the regular classroom should cooperate in their efforts to meet the needs of bright students. The gifted education program should be an extension of the regular classroom, not a separate entity. Efforts should be made to involve non-program students and to communicate with the regular classroom teacher. The building facilitator program enhanced the collaboration between the gifted program and the regular classroom.

Efforts can be made to enlist the support of the rural community. This may be accomplished by establishing an advisory committee made up of parents and community members, and by implementing a strong communications program. Every opportunity to communicate with the community through newspapers, community meetings, and invitations to the school should be utilized. It was especially important in this rural community to explain the gifted program and its focus on working with the classroom teacher. The Adams School advisory committee provides a good model in this regard.

An important implication from this study is that the individual classroom teacher is a critical factor in providing for the needs of gifted students. Adams School has strong teachers who are willing and able to meet the educational needs of bright students. Money, resources, and time are important factors, but without a willing and able teacher, curriculum differentiation in the classroom will not occur. Classroom teachers need to be aware of needs of gifted students. They need to be trained and supported to meet those needs. Then gifted students will be closer to having their needs met. There are implications from this study for the hiring, selection, and training of staff.

## Methodological Notes

### Data Collection

The site was visited numerous times throughout the school year. A total of 17 interviews and 18 classroom observations were conducted over a three month period. Field notes were recorded by hand during the observations and interviews. Field notes were transcribed as soon as possible after the interview or observation.

The data in this study were derived from three different sources: naturalistic observation, in-depth interviewing, and document analysis. Naturalistic observations were conducted at the Adams School. In-depth interviews were "more like conversations than formal structured interviews", making sure that the informant's perspective should "unfold as the participant views it, not as the researcher views it." (Marshall & Rossman, 1989). Appropriate documents were requested from subjects and were reviewed while conducting interviews. Such observations provided a clear picture of this site.

Observations were conducted in the community, school, and classrooms. The researcher's purpose was to approach the site as a newcomer and describe its physical and social aspects. While the regular classroom was the primary focus of observation, information gained through interviews led the researcher to further data collection.

In-depth interviewing or a "conversation with a purpose" (Kahn & Cannell, 1957, p. 149) was conducted with classroom teachers, principals, curriculum coordinators, teachers involved with gifted programs, students, parents, community members, school board members, and other parties. These semistructured interviews consisted of open-ended questions designed to explore a few general topics in order to gain information in "the subject's own words" and to "develop insight on how subjects interpret some piece of the world" (Bogdan & Biklen, 1982, p. 135). Similar "Grand Tour" questions (Spradley, 1979, p. 86) were asked of all subjects to obtain each subject's viewpoint on the research questions guiding the study.

Documents, such as official board policies and samples of student work were collected. I reviewed documents while conducting observations and interviews and gained a clearer picture of the site being studied.

## Data Analysis

Transcribed field notes and copies of documents were read, numbered, and assigned a code indicating the site and data gathering technique (i.e., interview, observation, or document). The data were reread in order to develop a coding system and were examined for patterns, topics, words, and phrases. Coding categories and "families" were established. The transcribed field notes were read again and code(s) were assigned to each unit of data. As these coding categories were refined, a tentative taxonomy of coding categories was constructed. After a final revision, a taxonomy of coding categories was completed. Each unit of data was then cut from the transcribed notes and glued to a 5" by 8" index card. The cards, marked with a different colored pen, indicated the origin of data and the information gathering technique. This system thus aided the data triangulation process.

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# CHAPTER 8: Successful Practices at Salisbury Elementary School

Stuart N. Omdal, Ph.D.

## Introduction

Salisbury Elementary School was nominated as a school where "successful practices" occur for high potential students. I looked for evidence of "successful practices" in the school in general and in one particular classroom that would describe these practices. The practices for high potential students at Salisbury Elementary School fit into the broad themes of curriculum, classroom design, instructional strategies, attention to individual students, and enrichment opportunities. Also, teachers, administrators, and community members believe in a common philosophy which impacted schoolwide enrichment practices at Salisbury Elementary. A description of the setting and of informants are found at the beginning of this chapter. The findings are explained in the second section and the themes conclude the chapter. Methodological notes are listed at the end.

## Setting

Salisbury is a small town in a seacoast region of northern New England. First established in 1742, it celebrated its 250th anniversary in 1992. The town is 15 square miles with a population of 4,000, which is average for a community in this part of New England. Antique shops, seafood markets, and outlet stores that cater to the seasonal summer tourist line the main thoroughfare. A number of 18th and 19th century homes and other buildings line the streets in the village and are found in outlying areas. Residents partake of a variety of occupations in Salisbury and a neighboring town, or they may commute to work in a nearby city. The Salisbury residents are more affluent than others who live in this part of New England; a larger number of retirees live in the town because of its proximity to the seacoast.

Salisbury Elementary is a vital part of the Salisbury community. For example, town meetings are held in the school gymnasium. New England towns are responsible for all aspects of local government: public safety and health, public works, tax assessment, social services, schools and other agencies. Thus, all voters have an opportunity to review the education budget and are more likely to be involved in the process than in states where the school district is a separate governmental entity and where budget reviews are held separately for each governmental agency.

School personnel are aware of the school's role in the community. Hope Knight, foreign language teacher said, "The community has made education a high priority." The Strategic Plan for Salisbury Elementary School states, "Our school's reputation as a superior elementary school is a source of community trust, support, and pride. Salisbury Elementary School must protect and nurture both the reality and the perception of excellence in order to ensure continued funding." One of the goals in the Strategic Plan is "be recognized by parents locally, and by educators nationally as an excellent elementary school." There is evidence that they are achieving that goal. National recognition was given recently to a project undertaken by the Enrichment Teacher at the school. The Turner Broadcasting Company gave her the "National Educator Award for Innovative Use of Cable in the Classroom."

Salisbury Elementary School is situated on 75 acres of land owned by the town. The site includes a school building, parking lot, playground, and a nature preserve with woods, marsh and meadows. A train goes through the preserve, and plans are being made to add identification markers for trees and create more areas suitable for teaching and learning experiences.

The school, built in 1950, is a two story, brick building with steep roof and New England cupola on top. It has been remodeled several times. There is a total of 26 classrooms with 414 students in kindergarten through grade 8. Twenty rooms are used as regular classrooms, the remaining rooms are used by specialists. In addition to the classroom teachers, the staff includes teaching specialists in music, band, physical education, library, art, computer/enrichment, and foreign languages. Support staff include the principal and assistant principal, counselors, learning disabilities specialists, "Reading Recovery" teacher, Chapter 1 teacher, speech clinician, occupational therapist, and six paraprofessionals.

Salisbury Elementary is part of a Regional Educational District (RED) that is made up of five schools that feed students into the same high school. Each town contributes a portion of their budget for operating the high school and the other services provided by the RED.

This study focused on Shannon Brown's fourth grade classroom, as well as the enrichment/computer specialist, Jan Lodge. Shannon Brown's classroom contains a variety of materials. Posters are mounted on walls. Bulletin boards extend beyond their boundaries with displays of student work or interest centers developed by the teacher. A feature that immediately catches a visitor's attention is a student-constructed "marble run" made of cardboard tubes and masking tape that is mounted on one wall. Students drop marbles in the higher end and predict how they would travel through the "Rube Goldberg"-type contraption. The classroom contains 20 students' desks arranged in groups of four. A rug and several bean bag chairs are located in one corner of the room. A large kidney shaped table is near another corner where Shannon often works with small groups of students. Stacks of dust-covered basal texts are located on a high shelf. Art supplies, resource materials, and multiple copies of novels fill the shelves in the back of the room. Student projects, both finished and in progress, are on tables and on the floor.

The large enrichment/computer room in which Jan Lodge works is the same size as the fourth grade classroom. About a dozen computers and accompanying paraphernalia take up half of the room. Two large tables provide work space for students who are building a remote-controlled, self-propelled, submersible device. A parent volunteer works in one corner to construct interest centers for classroom teachers to sign out and use in their rooms. Instructional posters for a thinking skills program are prominently displayed. A crystal apple sits on Ms. Lodge's desk, symbol of a national award presented to her by the cable television company. One fourth of the room is used as a work area by a reading instructional aide and the foreign language teacher.

## Informants

Jan Lodge, the Enrichment Teacher, helped to select Shannon Brown, the teacher who would be the focus of this study. Observations and several interviews were held with Shannon. During the interviews, Shannon made references to other teachers (Reading Recovery, language arts, social studies, foreign language, teacher librarian, fourth grade teachers) who were subsequently interviewed. Jan Lodge and principal, Will Merriam,

were also interviewed several times. The principal and teachers shared documents (i.e., school handbook, faculty handbook, proposed budget, newsletters) that were then examined to support observations or comments made by the informants. In addition, the enrichment program pamphlets were reviewed. Observations were conducted in the classrooms, enrichment/computer room, and throughout the school. In addition, I was included in a faculty "coffee" before school and a luncheon sponsored by the parents' group.

When I asked Shannon to select the students to be interviewed, she had a difficult time. She suggested sending home consent forms with all students and talking to them as a group. I asked the class what they remembered about fourth grade, and how this year was different from previous years in school. Six students were chosen and interviewed about their activities with the enrichment teacher.

Shannon Brown has taught for five years; three years have been at Salisbury Elementary. She continually takes courses at the state university and has enrolled in graduate courses on reading and process writing, manipulatives in mathematics, critical and creative thinking, and education for the gifted and talented. Jan Lodge noted that Shannon is "open to new things." The Principal said that she is always the one he thinks of first when he receives a brochure about a teachers' workshop. Shannon is committed to becoming a "process writing" teacher. She is young, energetic, focused, and completely committed to students.

Jan Lodge, the enrichment teacher, earned a Master's degree in the field of gifted and talented education from a university in New England. She has taught for 16 years as a classroom teacher and as an enrichment specialist. Her duties include computer instruction for all students in the school. Because she has several responsibilities, she must attend meetings frequently after school and at least one evening meeting per week.

Will Merriam has been the principal at Salisbury for five and one half years. He's a strong proponent of enrichment for children and a proponent of *process* over a *content* emphasis in curriculum and instruction. During the fall, he decided that he would resign as principal at the end of the year and to move on to new challenges.

Other informants include Barbara Lee, school teacher-librarian; Hope Knight foreign language teacher; Nancy Dierdorf, Reading Recovery teacher; Judy Benson, another fourth grade teacher; Mary Francisco, first grade teacher with whom Shannon Brown collaborates; Lou James, fifth and sixth grade language arts teacher; and Patty Barry, sixth grade social studies teacher. These teachers were eager to share information with me. They believed that special things happened at their school, and they wanted others to learn about them. In addition, formal interviews were conducted with students in Shannon Brown's class: Forrest and Peggy.

## Findings

The findings at Salisbury Elementary center around the following strategies: process approach to instruction; thematic integrated units; affect in the classrooms; collaboration; curriculum modifications; grouping for instruction, recognition of individual differences and interests; differentiated teaching strategies; and enrichment at the RED, school, and classroom level. These components will be discussed separately and then as common themes.

## Planning

Shannon Brown does a significant amount of planning and preparation before students enter her classroom. She has general goals for students and plans the curriculum in collaboration with other teachers.

### Curriculum Development

Teachers at Salisbury Elementary plan educational experiences for students based on state and local guidelines, textbook outlines, personal preferences, and/or student needs and interests. Achieving a balance between formal guidelines and teachers and students' interests and resources requires a thorough understanding of these components.

Shannon Brown does not rely on basal texts to guide her curriculum. In the area of mathematics, she served on a district committee, took several courses in "Math: A Way of Thinking", and familiarized herself with the state and local mathematics standards. In other subject areas she meets the district's requirements by tapping into the interests of the students and by using theme-based units. Shannon stated:

> I am meeting the district objectives, but addressing the interests of the kids, also. For example, for [a lesson on] two column note-taking, instead of just giving them any article we did the note-taking with owls [thematic unit] all within a context.

She addressed the required concepts and skills, but integrates her personal priorities and the students' interests in her instruction.

### Collaboration

Shannon Brown plans much of her curriculum in collaboration with other teachers. She works with other fourth grade teachers to plan units and order materials. This kind of collegiality is encouraged by the district and is reflected in their philosophy and goals' handbook which says, "The RED will encourage collegiality, open communications, shared decision making, problem solving and risk taking." Principal Will Merriam recognized the value of collaboration in curriculum development. Shannon Brown also consults with Jan Lodge when planning units and projects.

Teachers underscored the importance of collaboration at Salisbury School. Lou James, a sixth grade language arts teacher, stated, "If I were a Lone Ranger here, I wouldn't be able to do the things I do now and would go back to the way I used to teach. But with Barbara Lee and Jan Lodge and the other teachers I work with, I am able to provide more for kids."

Shannon Brown has students collaborate by linking them with first grade "buddies" on school projects. Other students in the school work with adult mentors on special projects of interest. Lou James said, "We do a lot of connecting in this school. Mr. Bolter, the custodian, was in World War II and then was the local stationmaster for the railroad. We try to connect students with mentors like Mr. Bolter."

### Classroom Environment

The physical arrangement and interior design of Shannon Brown's classroom create a comfortable environment. The furniture arrangement, wall displays, and the accessibility of resources and materials give the classroom an inviting ambiance.

The atmosphere reflects Shannon Brown's educational philosophy and goals. I noticed the first time I walked into the classroom, I observed her applying rubber cement to a large, student-made paper tree with an owl cut out of paper so it could be affixed to the wall. The tree and owl were the result of a student project on owls. She did not have students create their projects to conform to the dimensions of the bulletin board; rather, she adapted her display techniques to fit the students' products. Also the student-constructed marble run was not neat and tidy, but it was obvious that students' involvement with the apparatus and the experiences they were having were more important than tidiness.

An openness and comfortable atmosphere was reflected in the activities as well. For example, Shannon conducted a brainstorming activity with the students on the topic of bridges. This was an entry activity to an upcoming unit on bridges. A chart with the titles, "What we know about . . . ," and "What we want to know about . . . ," was posted in the room. Students were involved in planning unit activities and participated in the curriculum selection process.

## Curriculum Organization

Shannon Brown uses thematic, integrated units to help students make connections between subject areas. Before the school year began, she mailed a letter to each student that contained one puzzle piece announcing the first theme of study for the year—Mysteries. This created an engaging atmosphere. She includes major curriculum modifications and develops learning contracts to make educational activities appropriate and meaningful to her students.

### Thematic Units

Shannon Brown uses theme-based, integrated units as a strategy for teaching content and process. Some themes are major units of study, and the instructional activities may last for a month or longer (e.g., mysteries, owls, Japan); other themes are shorter (e.g., bridges, artifact box, state history). Shannon Brown tries to incorporate every subject area into a theme-based unit. For the unit on owls, the whole class read the novel *Owl in the Family,* dissected owl pellets, viewed films and video tapes, and searched magazines and books to gain information about owls. All students completed an owl project that included a written report and an artistic portrayal of an owl. Ms. Brown was very enthusiastic about using the theme approach. She said, "It seems the more themes that I develop, the more intense the kids get and the more excited. I think that happens because it comes from their interest."

Near the end of the school year when the students were asked what they would remember about fourth grade, most talked about the theme-based units that they had done during the year and the puzzle piece they had received. Developing the theme-based units required much extra planning. Shannon does this in collaboration with other classroom teachers, the library-teacher, and the enrichment teacher.

### Learning Contracts and Curriculum Compacting

Shannon Brown uses learning contracts and a process called curriculum compacting to modify curriculum for individual students. A learning contract is an agreement between a teacher and a student regarding a series of assignments or projects. The contract includes a list of assignments for the unit and the steps necessary for the students to complete the project. The teacher and student agree on a date when all parts must be completed. Students progress at their own rate to meet this goal. A contract system works particularly well when students have been pretested to work on material not yet mastered.

Shannon Brown modifies the math curriculum in this way. High ability students are assigned approximately 50% of the problems on the pages (e.g., odd numbered problems). The students' assignments are listed on a contract. Records of completed assignments are noted. She also records grades and makes any pertinent comments on the contracts. Students are pretested before beginning chapters in the math book. If a student scores 95% mastery or above, he/she moves onto the next chapter. In addition to doing pages from the basal math text, students are given enrichment and extension worksheets from math resource books. Students receive whole group instruction with math manipulatives at the beginning of a new chapter. Ms. Brown works with students who need additional help on particular concepts.

Initially, Shannon used contracts with only high ability students, but because the method appealed to other students as well, she decided to use this approach with all students. Most students do very well working at their own pace, and some of the "average" students demonstrate much higher achievement than they previously had. Shannon noted:

> This [contracts] really opened my eyes . . . this was . . . a very good tool for those kids. . . . And it wasn't always the high achievers that were doing the best on this, it seems to be working well because it is challenging to all of them.

## Teaching Style

Ms. Brown continuously strives to arrange educational experiences with a process, hands-on learning approach.

### Emphasis on Process

A traditional emphasis in education has been on the acquisition of information and on helping students learn how to organize, analyze, and synthesize information. Shannon Brown and several other staff members indicated that they use a process approach for their curriculum and instruction as opposed to a content emphasis. Shannon said:

> We're not a process school completely yet. You have to balance it. It is not fair to the kids to have all process and no paper and pencil. When they get to fifth grade, it is all paper and pencil. So I try to provide a balance.

When Shannon referred to "paper and pencil," she was equating it with drill and practice activities used to acquire content knowledge. Will Merriam, the principal, echoed Ms. Brown's sentiments:

> This school is being converted from a subject-based school to a process-based school. Jan Lodge deserves credit. She introduced the *Talents Unlimited* model, learning styles, communication, problem solving skills, and cooperative learning. The above becomes the vehicle for the content. In social studies, Patty Barry's classes have been studying China which is the least important aspect of the unit. There are maps on every wall—geographic, political, and demographic. The main focus is on learning how to learn about a country.

Patty Barry said, "It is not content I'm trying to do. It's the skills on how to get there." The RED Needs and Goals statement of the previous year encouraged teachers "to continue efforts to introduce and implement process writing and reading programs."

Shannon Brown selects learning experiences and curriculum that emphasize the development of concepts and process rather than activities that emphasize only content. The reading program prioritizes student-selected books and journals. In journals, students record their thoughts about the reading material, and the teacher responds with thoughts and questions. The writing process focuses on prewriting activities, rough drafts, editing, sharing with other students, and publishing written work. Students focus on specific elements of writing and ways to improve. The process approach in mathematics involves the use of manipulatives for concept building. As noted, students and teachers at Salisbury use a hands-on approach to learning. Forrest, one of Shannon Brown's students, said, "I like school. I don't like science. I like hands-on stuff, but not real science—reading and writing." (Apparently, he equated science education primarily with pencil and paper tasks.) Another student, Peggy, echoed his comment. "I like science. We do lots of hands-on things instead of just doing paper work. We are starting to do hands-on in math, fractions." The development of a hands-on approach in science was established as a RED goal two years ago. Ms. Brown usually worked with students extensively with manipulatives when introducing a new math unit. She said, "I had a lot of neat things out and a lot of kids were just experimenting. That was pretty much the purpose . . . to give them some experiences before I really started talking about it."

## Grouping for Instruction

In addition, Shannon Brown uses a variety of grouping options for more effective instruction. At the beginning of a new math chapter or when introducing a new science concept, she spends several class periods using total group instruction. She then switches to smaller group instruction for students who need instruction on specific skills while other students work on their individual math contracts. Ms. Brown explains:

> We start off with whole group lessons and then [do] mini-lessons. It depends where the child is on his/her contract or what they are working on. We'd work on whatever the kids need help with; the groups are always different. This can be motivating for some kids. You want learning to happen for every kid no matter what his/her level. I want to challenge everyone. But at the same time, the record keeping is unbelievable.

Shannon Brown also uses flexible grouping for reading instruction by using response groups. In response groups, the students talked about the books they read, and their classmates ask questions. Students usually make their own reading selections. Sometimes a group chooses the same book and meets together to discuss it with Ms. Brown. At other times, she chooses a book based on a theme for the whole class to read. Students also work in partner groups for reading. Several children like the arrangement, but some do not. One student, Peggy, said, "I don't like working with partners. I like reading by myself, 'cause I like to go at my own speed."

Shannon Brown frequently uses cooperative learning groups. The students' desks are arranged in groups of four. These four students work with each other on tasks in most subject areas. The groups are rearranged every two or three weeks. For example, the students formed construction companies for the bridge unit, and each student decided the role he or she would want in the company (architect, treasurer, builder, supply person). The school district encourages the use of cooperative learning as an instructional method. The Needs and Goals statement from the previous year states that teachers are encouraged "to continue to explore new methods, concepts, and issues in education such as cooperative learning techniques and right/left brain functions and how they complement interdisciplinary goals."

## Student Centeredness

Several practices at Salisbury illustrate that individual students are considered the primary focus. The school district focuses on the needs and interests of the students: this priority drives the district's policies and practices. Teachers recognize students' individual needs, pay attention to students' interests, and give choices to students.

### Recognizing Individual Differences

Every school is faced with the task of educating students who have unique characteristics and individual differences. The Salisbury Elementary School believes that meeting individual differences is a priority. Statements about the potential of the individual are included in several documents. The Strategic Plan of 1989 states:

> The vision of the Salisbury Elementary School is to effectively develop, use, and focus resources available to the district to actualize the potential of each student. . . . Salisbury Elementary School will, in the best interests of students and classes, strive for an educational program that will be appropriate for individual students. The Salisbury Elementary School program of education will not impede a student from pursuing any opportunity reasonably available to the student, and financially acceptable to the School Board. Salisbury Elementary School will support efforts of students able and willing to pursue special programs.

Also, the RED supports meeting the individual needs of students. A belief statement in the District's Philosophy, Goals, and Strategies document asks students to: "create learning activities based upon appropriate developmental characteristics and learning styles." The staff of Salisbury Elementary School addresses the issue of meeting individual needs in their staff handbook: "Given the diverse needs of our students, our educational program must be flexible in nature; that is, we must provide a variety of methods, resources and teaching personalities which meet the individual needs, abilities, and interests of our students." The Enrichment Program's brochure states that the mission of the program is "to respond to the unique needs of each student." One of the goals listed in the brochure is "to offer many different kinds of activities to many different students." These goals are reflected in teachers' classroom practices. For example, students were building a robot-like submersible in the Enrichment room that came from their desire to explore this topic.

### Student Interests and Choices

Shannon Brown meets students' individual interests in many ways. For example, she administers an interest survey to her class that helps guide her curriculum planning:

> I gave my kids at the beginning of the year an interest survey, and from their interest survey I determined what I was going to teach this year. So it is not like I always pull things out from my personal bag of tricks. I am trying to make learning interesting to them, and whatever they want to learn about is what I am going to try to teach them.

Shannon Brown uses the interests of the students in other ways. When working on projects, the students often have some choice in the project that is based on their interests. For example, when they worked on the Artifact Box Exchange program, they selected clues about their community to sent to another fourth grade class. Choices included recipes, picture of a house, a newspaper advertisement typical of the area, soil sample, map with key names or places "whited out," and a photograph of the school.

Students in Shannon Brown's classroom choose the topics that are aligned with their interests. When the students work in cooperative groups (e.g., making bridges out of balsa wood), they choose the tasks they would like to do based on their skills and interests. As part of their reading program, the students select books for independent reading. She helps them find library books or commercially available trade books on topics of interest to them.

Ms. Brown also gives students choices in school assignments. She allows the students to select their own reading material and provides them with a wide variety of books, magazines, and cartoon storybooks in the classroom. Also, students have choices in the execution of assignments, that is, whether they work alone or with a partner.

## The Enrichment Program

Salisbury Elementary School has an enrichment program coordinated by Jan Lodge, that services high potential students in the classroom and schoolwide. Official statements from the Regional Education District (RED) and Salisbury School address enrichment education and discuss the importance of meeting the individual needs of students. The RED Practices Statement of 1990-1991 stated that "nurturing the unique talents of each individual" was a major goal; it also noted that, "Students should exhibit self-esteem by recognizing their own strengths and weaknesses and deal with them realistically." The Salisbury Elementary School Student/Parent Handbook, 1991-1992 includes the following:

> At Salisbury Elementary School we are committed to providing all of the children in our school with the best education possible based on their needs, abilities, and interests. Whether we are successful or not depends upon our ability to adapt the learning situation to the individual and to provide an atmosphere in the classroom that is conducive to learning.

Will Merriam believes the Salisbury School must provide opportunities for students to express and develop their gifts and talents in a variety of ways. The co-curricular program includes a range of activities through which students can develop their talent: music, sports, drama, writing, creating problem solving, oratory, plus other mini-courses and special interests classes.

### Salisbury's Enrichment Program

The school district hired an enrichment coordinator (Jan Lodge) and began an enrichment program because classroom teachers advocated for a program. In 1987 a committee was formed to discuss possibilities for enrichment. Jan Lodge has always felt the support of the teachers and administration at Salisbury Elementary. When asked about the role that Jan plays in the school, Lou James said, "Jan Lodge was made in heaven and dropped from a cloud into this school." Mary Francisco, who has been encouraged by Jan to use enrichment activities in her classroom said, "When Jan came and talked about enrichment, we knew we were doing something special when we did it. Now it has become run of the mill; we just do those kinds of things all the time!" The "things" that Mary referred to include many of the teaching practices discussed previously as well as thinking skills, instruction in the *Talents Unlimited* thinking skills program, creativity development, and students' investigative projects. Jan said, "I see my role here as one of consultant/counselor/advocate, as much as that of teacher." Will Merriam considers enrichment to be "institutionalized," that is, an integral part of the school. He believes that hiring Jan Lodge was the most important thing he has done in the past five years at the school.

Jan Lodge's duties include assisting classroom teachers in curriculum planning, consulting with the teachers about individual students, securing guest speakers, coordinating the parent volunteers, and assisting individuals or small student groups with investigative projects. She organizes program activities for interested students across home rooms and grade levels and provides instruction in technology and thinking skills to classes. Examples include National Geographic Kids Network, computer classes, Project Jason—the submersible, a video project about Salisbury Elementary School, keyboarding, Lego Logo, Hypercard, Odyssey of the Mind, and IBM Computer Week. Some activities are scheduled with the classroom teachers, and others were taught as mini-courses. Six students in Shannon Brown's class participated in two activities. Many students participate in the Odyssey of the Mind (O.M.) program. The O.M. teams are coached by teachers from different grade levels and by a custodian.

Jan Lodge reports that most teachers make curricular modifications to meet the individual needs of high ability students. These include adjusting assignments, providing alternative reading materials, and making provisions for independent studies or investigations. The brochure for the enrichment program states:

> The Enrichment Coordinator, classroom teachers, support staff, and administration work together in a team effort with our main objective being to recognize the special talents of ALL our students. We believe "there is always one moment in childhood when the door opens and lets the future in."

## Enrichment in Shannon Brown's Classroom

Shannon Brown provides a variety of curricular differentiation and enrichment experiences for her students. For example, she gave high ability students enrichment pages that required higher level thinking in mathematics and later included more students because she felt they could benefit from the assignment. In reading, the high achieving students typically select books appropriate to their reading ability, Shannon responds in their reading journals by giving them appropriate challenges. She said, "When I'm writing to my higher achievers in their journals, I ask them to compare two books. So I am making it more challenging." When asked about school, a fourth grader in Shannon's class replied, "When we did the fractions, some of them were really challenging. It is challenging on the computers. It is more fun to have challenging things."

Many activities and experiences in Shannon Brown's classroom go beyond the usual coverage in a fourth grade classroom. She surveys the students about their interests and plans curriculum-based themes accordingly. She chooses teaching methods that take individual learning styles into account. Many assignments are open ended which enable high ability students to expand on them. For example, rather than give students a form to fill out for a book report, she encourages them to share the important things about the book in whatever manner they wish. One student videotaped favorite scenes from the book with the help of her family who provided the acting talent. Access to enrichment activities is available to all students. A caption on a poster in Shannon's room stated: "No best or better lives here, just the gift of differences."

Schools often have mission statements or goal statements that include phrases such as "meeting individual needs"; however, these schools don't do anything to address these goals. Practices at Salisbury Elementary indicated that the goals developed by the RED, the faculty, and the enrichment coordinator, are more than words on paper.

# Themes

What are the general practices at Salisbury Elementary School that make it an effective school for all learners? What are factors that have affected the philosophy, goals, and classroom practices? Themes that emerge from the findings and the data gathered from observations, interviews, and documents include meaningful curriculum, instructional strategies, individuality, and enrichment.

## Meaningful Curriculum

Shannon Brown, Will Merriam, Jan Lodge, and other faculty are pleased about the move from a content-based curriculum to process-based curriculum at Salisbury Elementary School. Shannon does not rely heavily on basal texts: she uses many other print, audio-visual, and human resources; she integrates the curriculum and thus minimizes divisions that traditionally separate school subjects; she presents instructional units in a holistic way. Students are actively engaged in learning by manipulating, building, and experimenting with materials.

The decision to use the integrated theme units and "hands on" strategies reflects a child-centered approach as opposed to a teacher-centered approach. Shannon and other teachers at Salisbury Elementary are aware of the importance of meeting the needs of the individual child. Advanced coursework, informal discussions and administrative support have helped teachers implement changes and address this goal.

## Instructional Strategies

Teachers at Salisbury Elementary see children as individuals with unique needs that deserve special attention. They use a variety of instructional strategies such as flexible grouping, curriculum compacting, and theme-based curriculum projects. In addition, they experiment with various instructional strategies. Although Salisbury Elementary has a small staff and is located in a rural area, the teachers are interested in learning about innovative practices and in improving their teaching.

## Individuality

Comments by teachers and the principal as well as policy statements from the school board, faculty, and enrichment program reflected the high degree of interest in the development of students as individuals. This may indicate a regional emphasis on individualism and pride in self-reliance, namely, the "Yankee" spirit. This particular town has only one school; thus, the school is the center of the community. The school district has promoted the idea of independence and the importance of realizing one's potential by providing funding for an enrichment program where students can pursue individual interests, have choices in the curriculum, and be challenged.

Because of this philosophy, the "soil was fertile" for the ideas presented by Jan Lodge, the enrichment program coordinator. Teachers were eager for someone to coordinate enrichment, and they willingly worked with Jan to meet the individual needs of students. The philosophy of the community, the willingness and desire of the staff, and the attitudes of the principal were pivotal in making the enrichment program at Salisbury Elementary so successful.

### Enrichment

The staff at Salisbury Elementary tries to provide students with challenging, interest-based activities that require students to use critical and creative thinking and problem solving skills. Previously, classroom teachers and parent volunteers had attempted to offer some opportunities for the students, but they realized that a full-time enrichment teacher could provide these opportunities for all students. The staff is not interested in a pull-out program that serves only a small percentage of the students. Staff members emphasize the "open door" aspect of the program and services that are available to all students.

In creating the enrichment teacher position the staff reflected on the priorities of the school: a child-centered curriculum, a respect for individuality, and a process-based emphasis in instruction. Jan Lodge has helped students pursue individual interests, worked with small groups of students, and assisted teachers with process skills. She has helped teachers access materials and resources that supplement and complement classroom activities. The changes and opportunities at Salisbury Elementary School have been possible because the community, faculty leaders (e.g., Shannon Brown), Jan Lodge, and the administration shared the same goals and beliefs.

## Implications for Gifted and Talented Education

Some lessons can be learned from the successful practices used by a fourth grade teacher, enrichment coordinator, and principal at Salisbury Elementary School. At the classroom level Shannon Brown demonstrated curriculum modifications that could be used successfully with high potential students. She used students' interests to plan classroom activities. She provided options to students in completing assignments and projects. She gave choices to students and used a variety of flexible grouping procedures in the classroom. High ability students thrived in this classroom environment, and she believed it [environment] is appropriate for other students as well.

As the enrichment coordinator, Jan Lodge is the resident advocate for high ability students and works closely with classroom teachers to plan curricular units and projects. Teachers view her as a resource who gives them ideas and a partner with whom to team teach. She is a support to all teachers. Jan provides after-school workshops on thinking skills and problem solving strategies, originally developed in the field of gifted and talented education. Jan Lodge is eager to share her expertise, and classroom teachers are interested in learning such skills and applying them. A wide variety of curricular and extracurricular activities are available to interested students at Salisbury. Jan makes sure that high potential students are aware of the many options and encourages them to participate when appropriate. All students know that the enrichment room is open and that they may approach Jan with questions and ideas about potential investigations and projects.

Jan Lodge did not go to Salisbury to reform the school, but the staff requested an additional staff member who could help provide more challenge and enrichment to students. The ownership of the enrichment program at Salisbury Elementary School is shared by the entire staff, parents, and community. The program is such an integral part of the school and community that when potential budget cuts were considered, parents immediately vocalized their support, and the program was maintained. In fact, a decision was made to add a computer specialist to allow Jan Lodge to spend full time as enrichment coordinator!

The attitude of school administrators also influences the success of the program. The RED and Salisbury Elementary administrators encourage teachers to use a variety of innovative teaching strategies and to develop interesting educational experiences for students. They provide funding for classes and workshops. Teachers meet informally to share ideas and are encouraged to collaborate. The administrators are not heavily invested in maintaining past practices, and they are not on any bandwagon for educational reform. They believe changes are good if they benefit students and teachers at Salisbury Elementary.

## Methodological Notes

I spent several weeks observing in the Salisbury Elementary School. First, I observed the physical environment and viewed the school and Shannon Brown's classroom with a freshness of eye. While conducting observations, I took extensive field notes and recorded questions I had concerning the school environment and classroom practices.

Interviews were conducted with Shannon Brown, several staff members, the enrichment teacher, the school principal, and several students. During the interviews, informants would often refer to documents, policy statements, reports, and other print materials. Copies of these printed materials were made available to me. I used these documents to guide further interviews and to develop essential questions.

After transcribing my field notes, I coded and analyzed the data. I used different data sources to corroborate findings and, eventually, the themes emerged.

# CHAPTER 9: Successful Practices at Springdale School

Thomas Hays, Ph.D.

## Setting

Springdale is located in the south central part of a midwestern state. It is a town with over 1300 residents, nine churches, a clinic, a nursing home and several recreational facilities. The economy is based on farming and light industry.

Springdale's school complex includes the elementary school and the Junior-Senior High School. The two schools house a theater, two gymnasiums, a computer lab, and two libraries. One of the libraries is equipped with technology so that students may conduct electronic database searches for research projects. The elementary school has 11 classroom teachers, an enrichment teacher, eight special teachers, a librarian/media specialist, a nurse, and a principal.

A first time visitor to Springdale Elementary School is struck by the uniqueness of its architecture. Instead of a traditional rectangle with rows of classrooms on both sides of a long hall, three interconnecting circles make up the main part of this school complex. These resemble the dwellings of the Indian Tribe that used to occupy the area. The first circle is the elementary school; the second houses the junior and senior high school while the third, called "the dome," houses the high school gymnasium. Like the prairie on which the school is built, the bricks are light in color with a sandy or reddish brown cast. The school emerges gently from one of the rolling hills of the surrounding prairie and seems to be at home here.

Classrooms are located along the outside edge of the elementary circle while the media center and library occupy the center of the circle. Students enter each classroom from the inside circle. Another door provides an exit that leads to the playground outside. One cannot get lost in this school for the circular "hallway" always leads back to the entrance. A walk down this hall reveals bright colors, lots of activity, and a friendly environment. The building is well maintained and spacious.

Bright colors greet the visitor to Springdale Elementary. The interior of the school is carpeted with orange in the hallways and either green or blue in the classrooms. The walls are painted in bright shades of orange, green, yellow, white, or blue. Each classroom has a window box display area next to its door. Strips of material on the wall allow teachers to "put up" student work. A large amount of student work is on display on the walls and in the display boxes at all times. Students read occasionally in an old bathtub, located in the media center.

There are no signs of overcrowding in the school. There is an office for the classroom teachers, special teachers, and the various programs housed in the building. The design of the building and carpeting limit the amount of noise.

The entrance to the elementary area has a display of awards that include "Outstanding Contributor to Education, 1986-1987," and "The North Central Association of Colleges and Schools Award of Excellence for the Years from 1985-91." The Governor of the state also honored Springdale Elementary School with the Educational Leadership Award, 1991.

Other areas of the school contain a bulletin board and display case devoted to academic achievement. This display includes: Student of the Month, The Honor Roll, The Academic Hall of Fame, The Top Ten Percent Award, Perfect Attendance Award, and the National Honor Society. Separate trophy cases honor speech and drama, music, and athletics.

Springdale's gifted program is a modified version of the Enrichment Triad Model (Renzulli, 1977) and the Revolving Door Identification Model (Renzulli, Reis, & Smith, 1981). This program provides enrichment classes in all elementary classrooms, pull out enrichment classes for identified students, and schoolwide opportunities to participate in independent study and academic competitions. One full-time teacher coordinates the program. A portion of the enrichment teacher's day also is spent teaching high school classes of identified gifted students.

## Informants

Nearly all the elementary teachers and staff members of Springdale School were interviewed and observed for this study. High school teachers, administrators, students, parents, and community members also were interviewed.

## Findings

### Differentiation Techniques and Strategies

What kinds of instructional strategies or differentiation techniques are used by classroom teachers with gifted students in Springdale Elementary School? Data analyses revealed that the teachers utilized two main types of differentiation techniques: curriculum modifications and instructional strategies.

### Curriculum Modifications

Springdale Elementary School's teachers employ a large variety of techniques designed to meet the learning needs of gifted students in the regular classroom.

Curriculum Compacting

The term "compacting," as used here, is the process of enabling students to cover the regular curriculum at a faster pace. Thus, this definition is similar to the traditional definition:

> Compacting consists of determining through formal and informal assessment procedures the curricular content areas that some students have already mastered or might be able to master through modified approaches to instruction. (Renzulli, Reis, & Smith, 1981, p. 78)

Students at Springdale are "compacted out" of strength area classes to free up time to investigate a problem or area in which the student has an interest. The enrichment teacher explained compacting this way:

> There are time blocks in my schedule for students who the regular classroom teachers believe need compacting. They make arrangements with me. Students work on enrichment activities as a group or individually, based on interest.

Classroom teachers often mentioned compacting as a differentiation technique. For example:

> We still do the regular curriculum; but I do other things with them. We eliminate work for bright students and we do a lot of pretesting.
>
> I compact children out, for example, when they are writing a story, I expect the bright children to write more. I sometimes skip some work they already know how to do. I follow the child's interest. For example, there was some interest in volcanoes. I go with their interest.

The enrichment teacher said that about half the Springdale staff uses compacting as a curricular modification strategy in the subjects of math, spelling, history, or social studies. The former enrichment teacher told about introducing compacting to classroom teachers:

> We talked a lot about that, compacting, [we] started with a few [teachers] who were willing and followed the kids with documents. I would ask, "How can you deal with this?" "Do you want to do the enrichment?" Some teachers did it by themselves; sometimes I did the compacting.

Students knew about compacting and were familiar enough with the process to use the term. When asked if she ever skipped work, one student replied, "Yes, in spelling and math I tested out. I did special projects, I did one on crystals, one on animation, and claymation." Also, parents talked about their children's curriculum being compacted. One parent used the term frequently when relating her children's educational experiences:

> Rick was compacted out of math in sixth grade. Joe and Carla have compacted out of some subjects. They did computer programs instead. Carla learned Spanish in one teacher's class and wrote mysteries in another.

Enrichment

Enrichment at Springdale Elementary School means adding breadth and depth to the curriculum for students who have the interest or ability to move beyond a unit or topic. Springdale teachers provide extensive enrichment in the arts. One teacher described these efforts as follows:

> The arts. . . . We have so many programs here. They [artists] come to the school. We took them to see "Wind in the Willows," and we have been to the Emmy Gifford Theater [a children's theater in the state's largest city]. We overcompensate in this area, because we are a rural school. We also have the Artists in the School Program.

Other teachers enrich in the classroom with manipulatives such as puzzles, Legos, blocks, art projects, and pictures. A first grade class used unifix cubes and pebble math while a third grade class was observed measuring the playground and its equipment with meter sticks.

The enrichment teacher regards providing enrichment as one of the main components of her job. She said, "I provide enrichment and teach higher level thinking skills, and creativity. So much of it [my job] is creative based learning." At least once a week she visits every classroom to provide whole class instruction based on enrichment activities. The classroom teachers usually remain in the room while she conducts her lessons.

A parent recalled the history of enrichment activities as follows:

> When my son was in the third grade, the enrichment teacher started with identification and basic enrichment. Now, the enrichment teacher goes in the regular classroom and works on creativity, and the teachers are teaching enrichment on their own. The program has really evolved and developed.

The enrichment teacher and the high school principal organize experiences for the entire school called "seminars." She explained them as "one-time, interest-based seminars" and mentioned the forensic pathologist, an expert on Jessie James, an inventor, and a dance troop as recent speakers.

Extension

Another modification technique at Springdale is called "extension." This technique is closely related to enrichment, but the teachers view it as a separate activity. Extension is defined as the process of extending a learning activity as regards the amount of time spent on it, or the level of difficulty at which it is taught. An extension is closely related to the regular curriculum and is used when the students show an interest in the topic. Most teachers at Springdale used the extension technique. A third grade teacher explained a typical extension in this way:

> I differentiate by using extensions in the regular curriculum. I integrate in social studies and language arts. For example, one extension was called "machines and assembly lines." I had them [the students] make a Cheerios box by hand. This was extremely difficult for some of them, yet some of them did it without a problem. You can see the students' talents with these projects. We also do research. Now we are researching natural resources and conservation. I want to extend it. The big thing is to go outside the book, extend, and use students' interest. Students will take off if you let them.

One teacher stated that she expands the regular curriculum by doing "fun things" like having the students "figure their age and weight on different planets." Another teacher researched the Presidential election. "They wrote campaign speeches, wrote newspapers, and held elections. This took a whole month. It started with an idea, but the kids took off with it."

Other staff members assist the teacher with extensions. The media specialist agreed that teachers do provide extensions, even at the second and third grade levels. A student observed that a project he worked on was "an extension of the regular class. "You pick your own [topic]; they put you into groups, and you are the expert." A parent described an extension activity that her child experienced in a social studies class. "During pioneer day, students dressed up and brought things like pioneers did, and they made ice cream. It gives them an appreciation for how the pioneers lived."

Learning Centers

Some primary teachers at Springdale believe that learning centers help to meet the needs of gifted students. The enrichment teacher identified such "centers" as one of the ways teachers differentiate for bright students. These centers offer students choices based on interest, higher-level thinking skills, and enrichment. Most centers include a number of activities aimed at low, middle, and high ability levels. The activities for high ability students usually involve higher order thinking skills, advanced level content, and opportunities to conduct research. I wrote the following account during a visit to a kindergarten classroom.

> The teacher opened the class by asking the students to get their center cards, think about which center they wanted to work in and complete their "responsibilities." She explained to the researcher that a "responsibility" is an activity that must be completed. The rest of the activities are optional. Children take the cards with them from center to center and indicate which activities are "responsibilities" and which are optional. One girl is making a pattern with plastic chain links. Four students are working on paper and pencil tasks at a table. One is cutting, one is watching, and two are working on activity sheets. Three students are acting out a play with inflatable characters called the "letter people." (The inflatable characters are shaped in the form of a letter.) Two students are combing their hair and brushing their teeth at a center located next to the sink. There is a cooking center, also. The students work at the centers in groups or individually, quietly, and efficiently. The teacher walks from one center to the next interacting with the students and their activities. The teacher plays music indicating that center time is over and evaluates the center work by looking at the cards and talking with each student about what they had accomplished that day.

Independent Study

As noted, the Enrichment Triad Model (Renzulli, 1977) is the programming model used by the Springdale Gifted Program. This model provides three types of enrichment experiences: general exploratory experiences, group training activities, and independent study projects on problem-based topics in which students have an interest. Students interested in independent study are encouraged to gather raw data, use appropriate research methodology, complete a product, and present the results of their research to an appropriate audience (Renzulli, 1977). Independent study is used by classroom teachers as a means to differentiate for gifted children in the regular classroom.

Parents and students provided examples of independent studies. One parent mentioned a study that her son completed on airplanes in third grade.

> The enrichment teacher sent home all of her husband's books on piloting and books on glider planes, where my son could test for aerodynamics or torque or something like that. He would test them and make suggestions on wing design and how to make them fly further.

Another parent mentioned her son's independent studies on genealogy and animals. One student completed a project on cartooning and one on ghosts.

Classroom teachers also mentioned using independent study. One teacher said, "We do a lot of writing. We keep journals, and we do independent studies. I try to pull things from the enrichment room . . . the students choose if they are interested." Another teacher told about a study her students were doing on the state's game fish. "They are going to make a slide presentation."

The "side effects" of independent study, including research skills, products, and appropriate audiences, were demonstrated in the regular classroom. The media specialist stated that, "Research skills are incorporated into the regular classroom, and that works better. I don't teach them, but help the kids as needed." The media specialist assisted students in learning how to use the computer and modem in order to complete literature searches with DIALOG. This is a program often used by elementary students. A first grade teacher urged her students to create a product and share it with an audience. "Sometime it would be fun to make a set of cards; maybe we could make it so second graders or our fourth grade pals could play with them."

A parent remarked that her daughter benefited from research skills taught in the regular classroom. "The research techniques and guided independent studies are a benefit; she doesn't need any help [to conduct research]."

Acceleration

Occasionally a student's abilities in a subject area are advanced beyond his or her peers. To meet the needs of these students, Springdale has accelerated students by using advanced, higher grade level material in specific content areas. Presently, a third grade student is working with the enrichment teacher at an advanced level in math. A parent remarked that because of acceleration, "The gifted program was his [her son's] savior again; he worked on his own pace, and he could devour what he was studying."

## Instructional Strategies

The teachers at Springdale School identified several techniques or strategies that they used to differentiate the curriculum for gifted students.

Higher Order Thinking Skills

Higher order thinking skills (HOTS) have been traditionally defined by experts in gifted education as thinking skills at the highest three levels of Bloom's Taxonomy: analysis, synthesis, and elaboration (Bloom, 1956). The enrichment teacher reported that Springdale teachers differentiate with questioning techniques. She added, "They use HOTS with specific students; if they finish their work early, they might give them a Bloom question." The enrichment teacher had students in the regular classroom practice using cause and effect, brainstorming, forecasting, and flow charting. The enrichment teacher also teaches higher order thinking skills to identified gifted students in the pull-out (TEAM) portion of the program.

A student remembers, "The enrichment teacher got us going in our thinking abilities. She allowed us to get answers to questions and problems our own way." A teacher summarized the cumulative effect of this process, "These kids have been asked to think differently from kindergarten on, and they don't look on something [challenges] as being impossible tasks for them."

Another teacher presented a science lesson to third graders that contained many opportunities for students to use higher level thinking as this field note account illustrates:

> The teacher passed out ice cubes to each of the students. "Think for a moment about what is the quickest way you can melt this ice cube. You can do anything to it." The students started to leave the room by telling the teacher where they were going. Several students went outside. Suddenly, they all started coming back into the classroom declaring that "my ice cube is gone." The teacher wrote their name on the board as they reported that their ice cube had melted. The students reported on the ways they chose to melt their ice cubes. Many chose to melt it in their mouth. The teacher asked, "What is wrong with this experiment?" "If you were a scientist what would you have to change?" The teacher probed the students for a few minutes and said, "If we are true scientists, we would want the ice cubes to be the same size and shape. The teacher stated, "We have done a liquid to a solid, what is next?" The students responded, "A liquid to a gas." The teacher conducted another experiment and questioned the students. Some examples of the questions were: "What happens to it? What makes it go back to water? Where is the cold coming from? Where else do we see condensation? Frost is what? How can I take this container and get frost? Can you see anything on the bottom of this plastic?"

In another observation, a teacher had the students compare the disasters suffered by people in the 1800s to disasters in the 1990s. The teacher used a comparison chart. "We are going to think about how similar and different they are, and we are going to brainstorm."

Several students recalled their teachers using questioning strategies. The enrichment teacher agreed that HOTS questioning is used frequently by Springdale's classroom teachers. The following reading class observation is an example.

> The teacher held a discussion of a poem and asked the following questions: How could the ants win? What could the ants use for a bob sled? What could they use for runners? What about paper clips? How did the ants feel when they lost? What good things happen at the Olympics besides winning? Can you communicate without talking? Don't you learn new things from people? Using context clues, what does it mean to be outclassed? Can you think of a situation where you were outclassed? Can you figure out what slogans mean? What is a shot put? Why didn't the ants win? Why were the ants popular? What's on the Olympics tonight?

Not all the above questions were designed to elicit higher order thinking; some questions related to were on the knowledge and comprehension level.

Student Choice and Interest

The instructional strategies of student choice and student interest enable students to have some voice in the way they learn and the topics they study. Choices of topics are usually based on student interest. One teacher said, "I provide a lot of choice based on student interest, especially during research projects." Another commented: "I try and pull things from the enrichment teacher's room—units that contain several projects. The students choose if they are interested." Two teachers indicated that student interest forces them away from their lesson plans. One said, "It's okay not to follow your plans and go with student interest." Another teacher agreed:

> I find out what they want to know, and allow them freedom to work on what they want. An example was a student who wanted to see if he could find any dinosaurs from a certain period; here is the material. . . . They love finding out new information.

A fourth grade teacher indicated that teacher interest plays an important part.

> I follow a basic lesson plan, but I deviate from it if it is worthwhile. If there is a project the students or I like, we will go for it. . . . I get bored if I do something over and over the same way.

Choice and interest are built into the learning centers in most classrooms.

Individualization

Individualized instruction is the process of matching the curriculum to the learning needs and abilities of individual students. At Springdale it means providing individualized attention to each learner. This technique was often mentioned in interviews as a way that teachers meet the needs of their gifted students. Students were encouraged to read books that matched their reading ability and interest. The following field note describes individualized reading instruction in a second grade classroom.

> The teacher is holding a conference with individual students while the other students are reading books silently around the room. She has the students read and

share books with her. She interacts with each student and gives them her full attention.

Individualization also takes place on a more informal basis. These excerpts are from interviews with a teacher, student, and parent.

> I have high expectations for gifted students. For example, when I give assignments for research, I give the more complex ones to the brighter students. In other words, I individualize assignments. (Teacher)

> You get a lot of individual attention, and they [the teachers] try to get students to participate with others. It is a small school, and that helps a lot. You get a lot of individual attention. (Student)

> They [my other children] really appreciated the teachers treating them as individuals. They [the teachers] didn't compare them to their older brother. When my next child was in their classes, and I told the teachers that they needed challenge, the enrichment teacher and the teachers gave them something [research projects and enrichment activities] to do. (Parent)

## Factors That Contribute to Differentiation

What factors contribute to classroom teachers' effective use of differentiation strategies at Springdale Elementary? The data were coded and analyzed to address this question. The following factors were identified: collaboration, administrative support, teacher training, prime mover, high expectations, and philosophy and belief systems.

### Collaboration

Teachers at Springdale "work together" or cooperate with each other to meet the learning needs of gifted students in the regular classroom. The data suggest two kinds of collaboration. The first was collaboration among classroom teachers, and the second was collaboration between the enrichment teacher and the regular classroom teacher.

Classroom Teacher Collaboration

The following field note illustrates collaboration among classroom teachers.

> The lunch hour was used today as an idea producing session. The teachers have been assigned the task of "studying" Ireland as a multicultural project. Each class has been given a topic by the committee to explore. The lunch period was spent exchanging ideas and looking up ideas in source books for the project. Ideas were shared, books and materials were offered in this free exchange. Teachers offered the benefit of their experience. There was little outward evaluation of the ideas expressed, making it similar to an actual brainstorming situation.

Teachers believed there was a significant degree of collaboration taking place to meet the needs of their gifted students. There was staff support for trying new things, sharing ideas, and working together. Observation data revealed the same spirit of collaboration as the following example illustrates:

> The teachers constantly explained and shared what was going on in their classrooms. One teacher had sponsored an event and enlisted the help of other teachers. She reported on the results and "goings on." . . . The table talk was nearly all about what was going on with individual students in classrooms. It

seemed that most teachers knew all the students in the school. The teachers seem comfortable with each other, are able to share, and are genuinely interested in each other's activities.

Gifted Program and Classroom Teacher Collaboration

The classroom teachers and the enrichment teachers have worked collaboratively since the program's beginning. The first enrichment teacher went into the classroom to make decisions about identification and programming. The current enrichment teacher continues the policy of cooperation between the gifted program and classroom teachers. She states:

> I talk to them [teachers]. This is a small district. I will put a note in their box, or go in after school for an informal meeting. Once in a while, I will make a copy of something that I need their input on. I try not to take up a lot of their time.

Classroom teachers follow through with what the enrichment teacher has taught. For example, a teacher explained the skills of cause and effect and forecasting which had been the focus of the enrichment teacher's lesson.

## Administrative Support

Data from Springdale teachers revealed six levels of support from the school district's administration.

Superintendent's Support for Teachers

For the last decade, the superintendents of the Springdale Public Schools have been supportive of teachers' efforts to meet the needs of bright students. Three classroom teachers and a community member recalled such support.

> A former superintendent was a real leader, and he gave us ideas and supported them. He insured that the personalities meshed really well. (Teacher)

> Excellent people work here. . . . In the seventies Dr. "D" was the superintendent, and he was a very positive administrator—a "do it" type of guy. (Teacher)

> The elementary teachers are trying to improve and are willing to improve. The principal has been supportive. They tend to improve themselves as well as the teachers. Dr. "D" and Mr. "W" set the philosophy in motion, working with the curriculum. (Community Member)

This support, started in the 70s, was a result of many people's efforts. One teacher said, "[It was] the administration, the school board, and the former enrichment teacher who really got the teachers going on differentiating the curriculum." According to another teacher, "The administration is open to new ideas; they give us permission and support our attempts to do new things. The school board is very supportive."

Principal's Support for Teachers

Using a non-directive leadership style, the principal gives Springdale teachers the freedom and support needed to assist them in their efforts to meet the needs of students. He said, "I lead so they don't know they are being led. I could ruin any program by directing it." The teachers expressed it in this way:

> The principal is loving and caring. He offers support and reinforces activities. Basically, we have administrative support; we are not tied down.

The principal's support extends to the gifted program. The enrichment teacher said, "The principal is very supportive; he is great." The present superintendent believes the gifted program has good support from parents, administration, and teachers and said, "The principal makes it happen, he facilitates a lot."

A community member believes that the administration is supportive of the gifted program even though at first "it served only a few students." The principal and a school board member are on the gifted program steering committee—a committee that determines program direction and evaluation.

Administrative Support/Inservice Training

The Springdale administration supports teachers by providing inservice training to help meet the learning needs of students. The teacher's room displays numerous notices of upcoming training sessions. These notices often have personal notes from the administration urging the teachers to take classes or attend workshops. The teachers were eager to receive the staff development training, and the administrators were eager to enable them to receive it. These training sessions also provided teachers with opportunities for collaboration as well as an awareness of the administration's support for their efforts.

During the summer of 1989, most of the staff attended a whole language workshop in St. Louis, MO. This conference was mentioned by every teacher interviewed as evidence of administrative support.

Administrative Support/Materials

Materials were abundant at Springdale. Individual classrooms were filled with books, math manipulatives, and science equipment. The library was well stocked, and supplies appeared plentiful.

The media specialist assisted teachers with the selection of materials and resources. A teacher noted, "Resources have never been a problem, the Educational Service Unit has many things we can use to enhance the curriculum." She also complimented the media specialist. "Our library and librarian are excellent. They do ERIC searches and are good about getting books."

Administrative Support/Budget

The Springdale School District does not appear to have the fiscal difficulties that some school districts face. A community member said, "We happen to be a wealthy school district. The state representative tried to change that and make them [funding laws] more equal and cut out the state aid." A school board member expressed the following when asked about budget, "It is not a problem; it never has been presented to the board as a problem." The present and former enrichment teachers agreed that the school district is willing to pay for quality education, stating, "Money was never a problem. Of all the school districts, it [Springdale] is more willing to put its money where its mouth is. The school is the community center; all kinds of things go on there."

## Teacher Training

In order to meet the needs of their gifted students, classroom teachers received university and staff development training. Teachers have had university classes, inservice seminars presented by the gifted program, and inservice workshops and conferences presented by outside agencies.

University Classes

The state in which Springdale is located requires individuals to have 18 hours of graduate credit to be "endorsed" to teach gifted students. An endorsement indicates that the teacher has completed the required number of graduate credits and is qualified to teach students in that area. Springdale's former enrichment teacher, the present enrichment teacher, and a classroom teacher have their endorsements in gifted education. Other teachers have taken university classes or received credit hours from workshops conducted by a nearby Teacher's College. The former enrichment teacher took summer classes at a well known Master's degree program in the education of the gifted because, "I realized that I didn't know enough; I went back to school to do it right."

Inservice Training

The former enrichment teacher, and to some extent, the present enrichment teacher provided inservice training for classroom teachers on the needs of gifted students. The former enrichment teacher described the inservice sessions as follows:

> I conducted "drip" sessions—twenty minutes worth of inservice every two to three weeks. I wasn't pushy. I didn't demand that people do things. I said yes when people asked. . . .

Classroom teachers and parents remembered the inservice sessions. One teacher recalled, "I have taken some classes. I'm involved in a State Project [a Javits Grant], and Jane [former enrichment teacher] gave me a lot of ideas." In addition to the inservice training, some teachers attended conferences and workshops on gifted education.

## Prime Mover

Meeting the needs of the gifted students in the regular classroom at Springdale was enhanced by their motivated, innovative, and well-trained enrichment teacher. Jane was born and grew up in the community. She graduated from Springdale High School and attended the largest university in the state. She came to Springdale Elementary after completing a Master's degree in gifted education.

The original idea for a gifted program came out of a school needs assessment. Jane approached the school board with a three-year plan. At first she was hired as a half-time enrichment teacher. During the second year, she was hired as a 3/4 time enrichment teacher, and by the third year she was employed full-time.

Jane used several strategies that helped to "build ownership" between the program and the classroom teachers (Reis, 1983). She started small and worked with the teachers who expressed an interest in gifted education. She established an advisory committee and communicated with all client groups. In the classrooms she "taught enrichment" to the entire class and started a pull-out program for identified gifted students that was based on the Enrichment Triad Model (Renzulli, 1977). Jane enrolled Springdale's students in advanced placement classes, the State Scholars Program, and facilitated a number of independent studies. She comments on the early days of the program as follows:

> I think I had a great need to succeed, and I put in a lot of time that I was not paid for. I went into the classroom at the beginning, because I thought it was important to make decisions about identification and programming. I realized that I didn't know about the model, and I went to NAGC [The National Association for Gifted Children's Conference] and went back to school to do it right. I did a lot of things with teachers that represented their ideas. I used the three P's; be positive, patient, and professional. . . . Whenever anyone was negative, it hurt me, but I swallowed

my pride and kept it going. I found other people who wanted to move forward, and other people started to see what was going on.

Jane's efforts resulted in tangible benefits. The comments below illustrate this:

He [the Superintendent] called and offered me the job, saying, "We don't expect you to be Jane, but you will be required to get your endorsement." The first year I called Jane a lot as I had no knowledge of the different programs. (Present Enrichment Teacher)

The gifted program got off to an excellent start. Jane Miller got the ball rolling; she set the foundation. (Principal)

During my first year, I felt inadequate. For the first couple of years, I wasn't sure what to do, I met with Jane. . . . When Jane was here she gave me a lot of ideas. (Teacher)

Students and parents also mentioned the help that Jane Miller gave them early in the program.

## High Expectations/Teachers and Students

The teachers at Springdale Elementary School have high expectations for themselves, for their peers, as well as for the entire student population.

High expectations that teachers have for each other may create "peer pressure" to do well. A fourth grade teacher stated that, "Springdale is known as a good school but is hard for new teachers." Teachers agreed that "paying your dues" as a new teacher was necessary before feeling adequate and comfortable as a teacher. The former enrichment teacher also felt pressure to make sure that what she taught in the regular classrooms was of high quality. A community member confirmed the high expectations that the teachers at Springdale have for each other.

In addition, the teachers at Springdale believe that all students should do well. Two teachers told of expecting more from students who can perform at higher levels. A parent and administrator discuss high expectations for students:

In the second grade the teacher was fantastic . . . really challenged the kids to excel and to do extra things they enjoyed doing. . . . In the fourth grade the teacher wanted him [her son] to excel. The gifted program was a place where he could follow his dreams. . . . In the sixth grade the teacher had high expectations, and he wouldn't perform. (Parent)

There are expectations that we challenge all kids; having a team in place, the school board policies reflect what is being done. . . . This is a good place, but we cannot rest on our laurels. We must look ahead. We are okay today, but what about tomorrow? (Superintendent)

## Philosophy and Beliefs

Data indicated that teachers in this school believe that their philosophy of education, belief system, and goals affect how they approach teaching and how they meet the needs of gifted students.

Most teachers at Springdale share the belief that teachers need to meet the individual learning needs of all students. This includes high ability students as well as low ability ones. The media specialist notes, "It is an attitude, not materials. It is being open. The teachers and students are allowed to expand and explore." A classroom teacher maintains that the teachers' belief in change is the reason for effective practices for bright students. The principal sees a combined effort by the teachers, administration, and the school secretary as the reason a "good tone" has been set for the building.

## The Gifted Program

The following summarizes the findings with respect to the gifted program's affect on strategies, materials, and training.

### Strategies

The gifted education specialist plays a significant role in demonstration teaching and modeling instruction by teaching weekly enrichment classes in every classroom. Teachers are asked to remain in the room while she is teaching the enrichment classes. Several teachers said that they "follow up" the enrichment teacher's lesson by using the strategy taught in the context of the regular curriculum. The presence of the gifted education specialist also enables the teachers to speak a common language about gifted education. Words like compacting, differentiation, and independent study were commonly used throughout the school.

Currently, a gifted specialist's dominant role is to assist teachers when they accelerate students in math or spelling as well as with compacting. She also is a facilitator for academic competitions like the Invention Convention and Future Problem Solving. In addition, all students in the school have an opportunity to complete independent studies on topics of their choice. The gifted education specialist acts as facilitator for these students and their projects.

### Materials

Over the years, Springdale's gifted program has collected a large amount of enrichment materials. These materials are stored in the resource room and include student books, professional books, science kits, activity books, gifted education journals, and media equipment. In this collection there are a number of books on teaching thinking skills, such as communication, planning, forecasting, critical thinking, logical thinking, decision making, and creative problem solving. There are also a number of "how to" books, books on special interest areas, and those that deal with teaching research skills. A number of these materials deal with special interest areas that students have used for independent studies. It was evident from classroom observations that classroom teachers borrowed materials from the gifted program.

### Training

Springdale's gifted program provided training for regular classroom teachers early in its history. The first enrichment teacher used what she called the "drip" method. She held a large number of short training sessions on a number of subjects related to meeting the needs of gifted students in the context of the regular classroom. These training sessions were held before and after school. Topics covered were identification, characteristics of gifted students, compacting, creativity, academic needs, social and emotional needs, and higher level thinking skills. Data indicate that the training sessions are no longer offered as frequently, because the needs of the teachers changed as the program progressed.

## Community Factors

The community of Springdale holds the school in high esteem; the school is the focus of the community. There is community and parental support for the total school population as well as for the gifted program. In exchange for this support, the community expects excellence from both teachers and students. Springdale teachers are expected to pursue excellence in teaching. Likewise, the students are expected to perform as regards learning. The people of Springdale expect the students to "do well": they are to be the best in academics, drama, music, and athletics.

### High Community Expectations

Data indicated that the community has high expectations for its school and for the teachers that work there. As one teacher said, "There is a wide range of people in our community, and they have had a good education. They want their kids to have one, also." A community member summarizes the town in this way, "The culture of Springdale lends itself to developing potential. People are interested in seeing their students do well. They are very competitive." Two administrators remarked:

> They [the community] are supportive. We need to get more local parents involved in talking about things. They have high expectations with extracurricular activities. They [the community] want the students to do the best they can do. We talk about how important it is to do well academically. They have pride in the community and are always very supportive. They have the traditional American values." (High School Principal)

> [There is] not much feedback in the community about the gifted program. The community is used to academic success and in athletics, drama, speech, 800 SAT scores. They are interested in doing well, whether it is in athletics or academics. (Superintendent of Springdale Schools)

As noted, the community has high expectations in athletics. For example, spring vacation is alternately scheduled during the boys' or girls' state basketball tournaments. Thus, when Springdale "goes to state," no school days will be lost.

### Community Support for the School

The community of Springdale supports the school and its programs so that teachers' may meet the needs of bright students. As one teacher put it, "The culture of the town is the culture of the school." Community members are proud of their school.

A community member compared Springdale School with a neighboring school district that does not have the same type of support. She said the people of Springdale are aware that they have a good community but can't explain exactly why the community and the school are "special."

> I grew up in Fenderson, and Fenderson and Springdale compete. I can't put my finger on the difference. The qualities that make Springdale geared toward education is the desire for success in the citizen's own life. It branches out into many areas. Fenderson is a picture perfect town—painted houses just so. Springdale is much more innovative and welcomes industry. Fenderson wants no outsiders. In Springdale you are respected for your opinions. It is who you are, not what church you go to. Springdale is close but not closed.

Community members felt that being rural was an advantage. Words like "tight knit" and "close community" were used.

### Parental Support

The teachers have parental support in their work with gifted students. Parents will "get behind" any project that helps the school. An administrator credits community interest and a strong parent group as the reasons for the school's success. The first enrichment teacher used parent advocates in helping her expand to a full-time position and move into the junior and senior high schools. The present enrichment teacher has two parents on her gifted advisory committee.

### A Community Focus

Springdale school serves as a focus for the community. The building is used for community activities; athletics, music, drama, speech and academic competitions are intensely "followed" by community members. A classroom teacher said,

> The school is the main source of entertainment for the community. The JC's, the community club, all focus on the school in everything. . . . We have programs in athletics, music, drama and speech. There are old people in Springdale that live for what goes on in the school. It comes down to family; it is a small religious-type community. The grandparents follow the kids through school. The relatives take turns supporting the boys basketball team or the girls basketball team. There is buddy to buddy support, also.

## Themes

Springdale School addressed the needs of gifted students through curriculum modification techniques of compacting, extension, learning centers, research projects, independent study, and acceleration. Teachers used the instructional strategies of higher order thinking skills, student choice and interest, and individualized instruction. Teachers at Springdale were supported in their efforts by the collaboration of classroom teachers with each other and with the enrichment teacher. The administration supported such efforts by providing funds for materials and inservice training. A well-trained and enthusiastic enrichment teacher was also a factor.

Teachers at Springdale had high expectations for each other and for their students. Such expectations, coupled with a common school philosophy and individual belief systems, made meeting the needs of gifted students a high priority in the school.

## Possible Implications for Gifted Education

Data supported several conclusions that could be helpful to an administrator, a teacher, or a parent. The implications are described below.

Springdale's teachers were well trained in gifted education. Classroom teachers should be able to identify gifted children, recognize their needs, and be able to use curriculum modifications and instructional strategies to differentiate curriculum. This can be accomplished through university classes and district inservice training. In addition, classroom teachers need access to appropriate materials and the training.

Classroom teachers need support and encouragement to meet the needs of gifted students. This support can be provided by the administration, the gifted education specialist, other teachers, and parents. A portion of the gifted education specialist's day should be spent consulting and collaborating with classroom teachers. He/she should share materials, resources, and time with the regular classroom teacher. Time should be provided for classroom teachers to collaborate and plan for gifted students.

The study at Springdale Elementary School illustrated the importance of high expectations. Teachers and students were expected to do well. The school district made meeting the needs of gifted students one of the priorities of a teacher in the district. This expectation should be included in the school's mission statement and be part of the district's evaluation process. This expectation should also be included in the selection and initiation process for new teachers. Administrators can formally and informally communicate the importance of this expectation. Principals need to foster a school climate that promotes these high expectations. Teachers should have high expectations for all children, for peers, and for student products and assignments.

Cooperation between the gifted program and the regular classroom is important in order to meet the needs of bright students. The Springdale site illustrates that gifted education programs should be a extension of the regular classroom, rather than a separate program. Efforts should be made to involve non-program students and to communicate often with the regular classroom teacher.

Springdale's community plays an important role in the life of the school. Efforts should be made to enlist the support of the rural community. This can be accomplished by establishing an advisory committee made up of parents and community members, by implementing a strong communications program, and by designing a broad-based program with flexible identification criteria. The gifted program will enlist more community support if the gifted specialist's position includes teaching enrichment classes in the regular classroom and consulting with the regular classroom teacher. Every opportunity to connect with the community through newspapers, community meetings, and invitations to the school should be utilized. It is especially important in rural communities to explain the program and its focus.

There is another implication from this site. Districts should make every attempt to hire a gifted education specialist who is creative and innovative. This person should be well-trained in gifted education, possess outstanding human relations skills, and have the high energy level necessary to meet the needs of gifted students in the regular classroom.

At Springdale, teachers are critically important in providing for the needs of gifted students. Money, resources, and time are important factors, but without a willing and able teacher, curriculum differentiation in the classroom will not occur. Classroom teachers need to be aware of the needs of gifted students. They need to be trained and supported in their efforts. In this way, gifted students in the regular classroom will have their educational needs met.

# Methodological Notes

## Information Gathering Techniques

### Data Collection

A systematic investigation of events, behaviors, and artifacts was conducted in the community, school, and classrooms. These observations had no specific structure but were guided by an established procedure. The researcher's purpose was to approach the site as one who was new to the setting and describe its physical and social setting. While the regular classroom was the primary focus of observation, information gained through interviews in the school and classroom led the researcher to further observations and interviews.

In-depth interviewing was conducted with classroom teachers, principals, curriculum coordinators, teachers of the gifted, students, parents, community members, school board members, and others. These semistructured interviews consisted of open-ended questions that were designed to explore general topics in the subjects own words. "Grand Tour" questions were asked of all subjects to obtain the subject's viewpoint on research questions guiding the study.

Formal documents (e.g., official board policies) as well as informal documents (e.g., samples of student work) were collected. Reviewing documents while conducting observations and interviews provided a clearer picture of the site being studied. A total of 17 interviews and 18 classroom observations were conducted over a three-month period. Classroom teachers, administrators, students, community members, parents, and school board members were interviewed. The interviews took place in the school building or at the home of the community member. Field notes were recorded in detail and were transcribed as soon as possible after the interview or observation.

### Data Analysis

The transcribed field notes and documents were read, numbered, and assigned a code indicating the site and data gathering technique (i.e., interview, observation or document). Data were reread to develop a coding system. The data were examined for patterns, topics, words, and phrases and coded appropriately.

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# CHAPTER 10: Successful Practices in the Sutton School District—Rogers and Franklin Elementary Schools

Marcia B. Imbeau, Ph.D.

## Introduction

Although gifted education programs have been reduced or eliminated in many states in recent years, gifted programs are mandated for all public schools in the south central state where the Sutton School District is located. A mandate, approved by a special legislative session on educational reform in 1983, requires all districts to have special programs for identified gifted students. Districts are not required, however, to address the needs of gifted students within regular classroom settings. Over a five month period, I spent several days observing two classrooms in the Sutton School District to describe specific practices that classroom teachers used to meet the needs of individual students. This chapter describes those strategies and the influence of additional factors that have impacted practice in Rogers Elementary School and Franklin Elementary School, in the Sutton School District.

## The Setting

Sutton is a town of 29,000 residents who are predominantly Caucasian and from lower to middle income families. However, executives from some of the largest businesses in the state live in Sutton. The types of businesses and eating establishments typically found in middle class communities are located in Sutton, along with several trucking and agricultural companies. The Assistant Superintendent of the Sutton School District stated that one third of the primary age children receive free or reduced lunch, although that proportion was not found in the classrooms at Rogers and Franklin Elementary Schools. These two schools are located in predominantly middle class neighborhoods with modest to large brick homes and well-maintained yards.

The Sutton region is a fast growing area, with some of the best schools in the state. Sutton is rapidly growing because of its low unemployment; this is due to the trucking and poultry businesses. Teachers and administrators report that all of the elementary buildings are crowded, and a new elementary school is needed. Because Sutton and the surrounding communities are relatively prosperous, they provide a stark contrast to the other regions of the state.

The Sutton School District consists of one large high school, two junior highs, and eight elementary buildings. During the 1991-1992 school year, the per pupil expenditure was $2,490.96, and the average teacher salary was $29,345. The total student population of the district is 8,225 students. The K-6 enrollment in Rogers and Franklin Elementary Schools is 620 and 640 students, respectively.

Rogers and Franklin Elementary Schools are relatively new. The Rogers school building is only five years old. Both schools are attractive and decorated with much student art work; however, Rogers School looks like a showroom with its unique signs and displays throughout the building. The Assistant Principal here is an artist and made all

of the banners, signs, bulletin boards, etc. for the building. She also designed several elaborate projects and displays for teachers including a banner that hangs from the ceiling at the school's entrance that includes every teacher's name on it. Both buildings are attractive and have an inviting atmosphere.

## The Classrooms

I conducted observations in Barbara Jones' fifth grade classroom at Franklin Elementary and Carey Foster's third grade classroom at Rogers Elementary. Although the majority of my time was spent observing their classrooms, I conducted observations in all of the teachers' classrooms at the third and fifth grade levels. There were four teachers per grade level at Franklin Elementary. The Rogers Elementary School had four classrooms per grade level; one third grade classroom was a combination second and third grade. I made visits to these schools on different days of the week to observe different types of learning activities. Twenty-eight children were enrolled in Barbara's classroom, (the maximum enrollment established by the state), and Carey had 24 third graders in her classroom.

Large bulletin boards for class rules, centers for reading, social studies, science, and a computer station were located in Carey Foster's third grade classroom. The bulletin boards in her classroom resembled the elaborate displays found throughout the building. Students' desks were organized in two large rectangles. A cart, located at the front of the class between the desks, contained teachers' guides, a plan book, and student papers. Large storage cabinets were located at the back of the room and were turned around so that the back sides of the cabinets could provide space for displaying student work.

Barbara Jones' classroom was decorated with bulletin boards, learning centers (economics, reading, social studies), a chalkboard, and cubbies for students' books and papers. The desks were arranged in a U-shaped configuration with another U-shape inside the larger one. Barbara's desk was located at the rear of the room, but she rarely spent much time there when the students were present. The atmosphere in both classrooms was pleasant.

## Informants

Although most of the time was spent in Barbara Jones' and Carey Foster's classrooms, I talked with their colleagues and observed the gifted education facilitators in each building. Interestingly, the resource rooms for the gifted in both schools were located across the hall from the classrooms of Barbara Jones and Carey Foster.

Carey Foster had been teaching for seven years—four years in Kansas and three years at Sutton. A bulletin board display in the teachers' lounge described Carey as "intense, dynamic, youthful, clever, and nifty."

Barbara Jones had been teaching for 10 years at Franklin Elementary and was actively involved in professional activities beyond the classroom. Along with the teachers at her grade level and the gifted program facilitator, she received statewide recognition for outstanding achievement in Economics Education competitions (the district won five out of the nine awards given) and national recognition from the International Paper Company Foundation. She was honored by the State Council on Economic Education and was honored at the annual ASCD conference in New Orleans. Barbara was also one of five grade-level consultants who provided advice and input for a state history text that was published by Macmillan/McGraw-Hill (1991). Barbara had a professional and personal

interest in gifted education: her two daughters were in the gifted program at Franklin Elementary.

Initially, students in both buildings were curious about my presence because I frequently carried a pad and pen. When I entered the classrooms, students glanced up only upon my arrival and then returned to whatever they were doing. Frequently, I asked students to clarify activities they were working on, but I did not formally interview students for the study.

## Findings

Although the findings from the two classrooms were similar, the supporting data were different. The two sites are described as follows.

### Rogers Elementary School

The interview and observational data from Rogers Elementary centered on five broad categories: (1) teacher characteristics, (2) instructional strategies, (3) the gifted and talented program, (4) administrative influences, and (5) the district's gifted education program coordinator. Each of these categories will be presented with supporting evidence.

#### Teacher Characteristics

After spending several days observing Carey Foster's classroom and interviewing her peers, several characteristics of a distinct teaching style were apparent. Carey Foster is aware of students' individual needs, responds to students with much affect, expects students to work responsibly and independently, and demonstrates genuine interest in each child's growth and development.

Carey nurtured an atmosphere of acceptance from the beginning of the year by trying to make everyone feel as if she/he was special. She noted that with nine identified gifted students, "You have to plan things that are going to be challenging; and everyone needs assignments that are interesting." Carey felt that she was perceived by the principal as having good classroom control, even though there were several children with behavior problems in her class each year.

Carey Foster gave a great deal of personal attention to individual students. She used whole class instruction for some activities and assignments, and created an expectation that everyone should do his or her best. Her interactions with students, whether they were asking a question or showing their work, were always positive.

Carey demonstrated interest in students by frequently walking around the classroom. When teaching a reading group, she would sit in a chair at the carpeted reading area, but would be up and about the room checking on students working in the other reading groups. While bustling about, she would ask students if they could share their work with the rest of the class. She would say, "Listen to this," and would proceed to share the student's work. This technique was used most frequently with creative thinking activities.

Carey helped her students to become responsible and independent learners by placing written instructions on the board for various assignments. There were no bells and no verbal instructions for getting started with their day.

Tolerance of individual differences was evident in Carey's classroom. At the Rogers School, there were special education children in self-contained special education classrooms. After explaining to her students about the role and responsibility of being a "Buddy," Carey's students applied for semester-long positions to assist children with disabilities during music, physical education, story, and recess time.

Stephen and John are interesting examples of students with individual differences. Carey and Beth Greer, the gifted education facilitator, asked if I had noticed John. They said he was a very unusual child, primarily because he did not conform to the stereotypical view of a "typical good student." Beth explained that she fussed at this student once because it appeared that he was not paying attention; upon quizzing him, however, she found he knew everything that had been discussed. Carey said that she called John's father every night for three weeks to make sure he knew his son's assignments. She felt that this effort showed John that people do care about him, and he should come to school prepared. The teacher also said that he and Stephen, another able student, were very good friends and made an unlikely pair because they are complete opposites in manner, but had similar academic interests. Recently, they completed a chemistry project together in which John, the more flamboyant one, did most of the talking while Stephen, who stutters somewhat, did most of the research.

Carey Foster was genuinely concerned about topics that interested students. Stephen was constantly into a book, topic, or project. One day Carey noticed that he was on the floor frantically looking up something in an encyclopedia. She found out that he had read the following on her calendar: "King George VI died, succeeded by Queen Elizabeth II in 1952." As he didn't know about King George VI, he thought he should try to find out. She helped him with his investigation.

Carey provided time for the students in the gifted and talented program to share their projects with the rest of the class, saying, "Today we are going to have our class members share their Type III projects . . . we can learn some new things, and also maybe we can do some of the same kinds of things in our class that they do in G/T." The Type III projects were independent investigations that the students conducted to pursue interests in specific topics.

## Teaching Strategies

Although Carey's teaching strategies were quite traditional, they appeared to be effective in meeting the individual needs of students. She did not appear to design or create *original* curriculum, but searched for activities that she thought the students would find interesting and challenging. She consulted frequently with other teachers at her grade level and with the gifted education facilitator (who said Carey was always open to new ideas). Carey used lessons that required students to be both actively involved with the subject matter and physically active. Many of these activities were designed with application in mind. For example, after a lesson on adjectives, students cut out adjectives from the newspaper and glued them on manila paper. The sheets would later be used as a reference tool for creative writing activities. When teaching students how to use calculators, Carey combined this skill with the concept of weightlessness from a recent science lesson. She used information about gravity on different planets to have students calculate their weight. One student showed me that he weighed 48 lbs. and, therefore, would weigh 1.44 lbs. on the planet Pluto.

Carey used two types of grouping strategies—grouping by ability and for cooperative learning. She grouped by ability for reading instruction. The high ability

group was currently reading *The Incredible Journey* by Sheila Burnsford; this was the only group that was using a novel; the other two reading groups were using the basal reader.

In addition, she frequently had students work in small groups and planned specific activities for cooperative learning strategies. During a math lesson on word problems, students were grouped according to ability levels to assist others with difficult reading. Upon completing the activity, one leader was overhead saying, "I wish we had to do more." It was obvious that students were successful and enjoyed the activity. Another example of cooperative grouping was found in a creative thinking activity. Students, in groups of four to five, were asked to brainstorm a list of 10 new uses for a birdbath, snow tires in Hawaii, old newspapers, surfboards in Alaska, and old tires. This activity was an introduction to a mini-unit on inventions.

Carey Foster also provided curricular modifications. She stated that students in the gifted program never had to make up work they missed; however, they always checked in with her when they returned to the classroom. During the time that nine students participated in the gifted program, Carey gave individualized assistance to other students.

Carey provided challenging work and had high expectations for her able youngsters. One student explained that for spelling, challenge words were presented to everybody as extra credit, but for students in the gifted program they would be counted wrong if missed. Also, gifted students worked on projects to meet curriculum objectives rather than completing the regular assignments. For example, one student invented a game using information about simple machines rather than doing the class assignment.

A variety of enrichment activities were incorporated into Carey's teaching. Students appeared anxious to complete the regular work in order to go on to extra learning activities. Art activities, books at various learning centers, and the lone computer in the corner of the room frequently captured the students' attention. Every teacher had a computer in his or her classroom; however, there were no printers. The chalkboard had a section labeled EXTRA TIME? with an assortment of optional enrichment activities for students who finished their work. Examples of these activities included:

1. Shopping Center—a learning center with instruction cards, catalogs, and calculators. Students were asked to find specific items totaling a particular amount (e.g., find toys totaling $15.00);
2. Space Story—a creative writing option. Students were to imagine living on another planet (this was a creative extension to the science unit on the solar system);
3. Planet Sheet—a worksheet with interesting trivia questions that students were to investigate with regard to various facts about the study of the planets;
4. President Sheet—an enrichment page, similar to the planet sheet, and used around the Presidents' holidays.

In addition to making these options available to all students, Carey allowed students to work with friends to complete the activities.

### The Gifted Program at Rogers Elementary School

The gifted and talented program at Rogers Elementary School was part of the total school program and used a modified "send out" program based on Renzulli's Enrichment Triad Model (1977) to provide services to identified students in grades 2-6 for two one-hour sessions per week. (The Enrichment Triad Model is comprised of three types of

experiences: Type Is are exploratory activities; Type IIs are training activities in cognitive and affective skills; and Type IIIs are independent investigation activities.) The State Department of Education requires 150 minutes per week of direct services for identified gifted and talented students; thus, the gifted program at Rogers Elementary meets the additional 30 minute requirement in two ways. First every student selects one Friday enrichment speaker (Type I experience) per month. The schedule of speakers is sent to all classroom teachers prior to the beginning of the month. The Friday speakers are scheduled from 9:00 a.m. to 10:00 a.m. Although other students from different grade levels are frequently invited, this extension satisfies the state requirement for the identified gifted and talented students. To meet the remaining 15 minutes of mandated time, the teacher of the gifted selected Type II enrichment activities and asked teachers to conduct them with students. These activities, called "Weekly Sponge Activities," involved instruction in thinking skills designed to enhance students' critical reasoning or creative thinking. Carey thought these activities were worthwhile and interesting for all of the students. The gifted program coordinator believed the "Weekly Sponge Activities" were another way of creating program ownership. She also believed that the principal liked the gifted program at Rogers because the "Weekly Sponge Activities" and the Friday Enrichment Speakers allowed all teachers and all students to be involved in the program.

In addition to the Type II instructional activities, the gifted program influenced other school activities. For example, students in the gifted education program participated in a year-long program on economics education entitled "From Minds to Market." In this program the students in the gifted education program designed products, determined how to mass-produce the products, and decided how to market the products. Students in the regular classrooms were recruited occasionally to assist in various phases of the program, and all students in the school were eligible to receive G/T Bucks from their classroom teachers. Teachers devised their own incentive systems for which G/T Bucks could be earned in individual classrooms. Students used the G/T Bucks to purchase products at the "Product Market" held during the last month of school.

### Administrative Support

The administration at Rogers Elementary supported teachers' efforts for differentiating curriculum and instruction. Carey and the third grade team had one hour of team planning time together each week to plan units of study and develop activities around a broad theme. In the fall the teachers planned a unit on Indians and a unit on Christmas Around the World. They also discussed a potential unit on banking that would be taught after the minimum performance test was completed. The principal at Rogers Elementary supported the gifted program in several ways. She provided funding for Beth, the facilitator of the gifted, to present a session about the gifted education model used at Rogers Elementary at the annual state conference on gifted education. Also, the principal provided a classroom for the gifted and talented program that was exceptional in that it was a large, regular classroom space.

The overall atmosphere within the building was warm and inviting. For example, each month students and teachers wore the school colors, and the PTA would sell popcorn and sodas. Teachers who had birthdays each month would be honored in the teachers' lounge with goodies, cards, and small gifts. The teachers' lounge was always filled with incredible food. When I commented to the principal about the array of delectable goodies, she smiled and said, "Rogers folks like to eat, and they're very good about looking out for one another."

### District Gifted and Talented Coordinator

I often saw Mary Bass, the coordinator of the district's gifted program in Sutton, in the schools when I was observing. It was obvious that she was influential in getting teachers to accept the gifted program. Mary had taught at both schools and felt there was "a hum, buzz, and excitement" at Rogers and Franklin Elementary Schools. She believed both principals would be willing to participate in this study. Specific details regarding her influence and more information about the district's gifted and talented program will be described later in this chapter.

## Franklin Elementary School

The building design and the atmosphere at the Franklin Elementary School are different from the Roger Elementary School. Several findings, however, are similar. Five broad categories emerged from the data that were collected at Franklin Elementary School. They are: (1) teacher characteristics, (2) instructional strategies, (3) competition, (4) administrative influence/support, and (5) the school's gifted and talented program and coordinator. Each category will be explained, along with supporting evidence.

### Teacher Characteristics

While the characteristics of teachers in both schools were similar, the styles of Barbara Jones and Carey Fisher were different. Both of them were effective in implementing large scale classroom projects and competitions with students, but Carey would leap at the opportunity to work on projects and would worry later about "pulling them off," and Barbara would do the worrying and planning before initiating a project. Barbara was relaxed and even-tempered. She was never upset or overly excited about events, student behavior, parent requests or comments, or schedule changes. Frequently, she made positive comments to students regarding their work or behavior and didn't find it necessary to raise her voice in the classroom. When necessary, she reminded students to lower their voices and get to work. Barbara indicated that this year's students were more difficult than in previous years and required more disciplining. This class was not able to work as independently as previous students had been.

Four students in her class were identified for the gifted program. When asked what she did specifically to meet their needs, she replied that she gives whole class assignments but makes adjustments for these students when it's appropriate. In her class, gifted students do not make up work they miss when they participate in the gifted program activities unless they miss a story in reading; then she'll ask them to read during silent reading time.

### Instructional Strategies

Barbara Jones used a variety of instructional strategies to meet students' individual needs. These included grouping, active learning, modified assignments, games, and class projects. All students appeared to enjoy the activities and the challenges that they were offered.

The fifth grade teachers used ability grouping as a strategy for instruction in mathematics. Barbara Jones used this same grouping and active learning in social studies classes. The social studies curriculum included colonial life on the plantation. After listening to *Amos Fortune, Free Man* (by Elizabeth Yates) during homeroom each morning and participating in class discussions of that era in American history, the students designed their own plantation. Barbara allowed five students per group (self-selected), gave each

group a poster board, and asked them to bring materials that would represent the plantation they wanted to design. Each group shared the features of his/her plantation.

On another visit students were using chocolate chip cookies in the social studies class. Barbara and her colleague had developed an economics unit around the topic of chocolate (coinciding with Valentine's Day). On this particular visit, students examined their cookies (which represented islands) and identified the specific geographic features that they could find. The students were instructed to name their island making sure that the name had something to do with chocolate. After each student described his/her island, he/she ate the creations.

## Competitions

The Superintendent of Sutton Schools publishes a weekly column in the local newspaper in which he frequently describes awards that groups or individuals have received. Franklin Elementary has received several different awards and won several competitions.

Barbara Jones has participated in state and national competitions on economics education each year. During this research study, Barbara and a colleague developed an idea for a business designed to introduce students to basic principles of economics. Teachers and students decided on a Valentine gift delivery service. The students decided that they could make large, decorated, chocolate chip cookies with balloons tied to them. Parents, students, and teachers could order them, and the class members would deliver them throughout the school. The students formed a corporation, complete with a board of directors, department heads, and workers. The department heads (production, advertising, sales, delivery) determined the tasks and the qualifications that the workers would need to complete jobs. Students bought stock in the corporation for $1.00 a share and engaged in lively discussion about the risks involved in purchasing stock in a new business. Franklin Elementary had been involved in 13 winning economics projects over the last 10 years.

Students were also involved in writing competitions. The local shopping mall sponsored a Presidents' Day Essay Contest for the fifth and sixth graders from Sutton and Chelsea, a neighboring school district. Barbara gave her homeroom class the opportunity to complete this activity in place of the text assignment. Students were to complete an essay entitled "If I were President . . . " for the competition. One student essay in Barbara's class won first place in this competition.

Awards and competitions were not just found at the classroom or school level. The district as a whole prided itself on all of the awards they received. School Superintendent, Dr. Chris Ford, received a prestigious National Award for Volunteer Leadership from the Joint Council on Economic Education. The school board president, Mr. Robert Jones, believed that Dr. Ford's leadership as the president of the State Council on Economic Education for the past three years was responsible for the award given to the state (not the district) as Number 1 State Economic Education Program in the nation.

## Administrative Influence/Support

The principal of Franklin Elementary, Dr. Smith, was a positive influence in the school. She nominated Barbara as a focus of this study because of her teaching ability and because she was highly regarded by her peers. Barbara believed that Dr. Smith offered administrative support to try new ideas without the fear of a negative evaluation. Dr. Smith stated that she expected everyone to try something new each year, recognizing that different teachers had different strengths and interests. It was important that teachers chose the

direction they wanted to pursue with regard to improving their teaching skills and implementing new programs. She believed that her school had "tradition, with flair," and she encouraged teachers to extend and enrich.

Dr. Smith was recognized by other educators as a leader and an innovator. She was the past president of the state's elementary principals' organization, and was one of six educators in the state to be chosen "Educator of the Year." This award was sponsored by the state's Department of Education and the Milken Family Foundation. A district newsletter quoted her as stating:

> I am most proud to be a professional educator. I believe my role as a principal is to facilitate maximum productivity in others. I demonstrate high expectations for myself, our staff, and our students. Individuals are motivated through open, positive communication to perform to their potential. My enthusiasm for learning and teaching is contagious to a knowledgeable and caring staff aided by tremendous parental support. A positive school climate is provided for students that is most conducive to learning.

The award involved recognition ceremonies in the state and in Los Angeles, and she received a check for $25,000.

**The Gifted and Talented Program**

The gifted and talented program was influential at Franklin Elementary School as it was at Rogers. The gifted education facilitator at Franklin, Jackie Smith, described several interesting events and program activities.

Jackie's gifted education resource room was located directly across the hall from Barbara's classroom; they shared the same lunch schedule. During the previous year, Jackie worked with the fifth grade teachers on an economics project that had won a national award. Jackie had a full schedule of gifted program activities such as the following: Shakespeare Festival, Quiz Bowl, Science Olympiad, Odyssey of the Mind, Media Festival, and Product Market! These events involved identified gifted students as well as other interested students. The gifted education facilitators as well as Mary Bass, the district program coordinator, and parent volunteers were involved with the planning and organization of events.

Mary Bass is a half-time gifted program coordinator and a half-time DEEP (Developmental Economic Education Program) coordinator in the Sutton School District. She edits two newsletters (one for each program) that are distributed throughout the district. Thus, information about these programs is communicated carefully to the public.

I attended two evening events sponsored by the gifted program. The Shakespeare Festival had so many participants that it had to be held on two consecutive evenings to accommodate the large audiences. The Science Olympiad, a first time event, was held after school at one of the junior high school buildings. Several of the teachers at Franklin helped with the event. One volunteer sponsored the naked egg drop event in which 79 students participated. At the awards ceremony, the junior high gym could not accommodate all the students and parents.

The gifted program in the Sutton District is based on the Schoolwide Enrichment Model developed by Renzulli and Reis (1985). Each school implemented the program differently to accommodate the needs and interests of the students, staff, and administration. Approximately 9% of the total student population is served in the gifted

education program. Mary Bass, program coordinator, was interested in opening up some activities in the gifted program to other interested students, but it is not always possible due to a limited number of staff members. Two of the nine gifted program facilitators travel between two buildings in the district.

The gifted education program in the Sutton School District has been recognized as one of the best in the state. Each year school districts are required to submit a report with descriptions of program activities and a program evaluation as mandated by the State Department of Education's Gifted and Talented Program Approval Standards. The Governor's Advisory Council for Gifted Education reviews these reports and selects the outstanding small, medium, and large gifted program. The Sutton Gifted and Talented Program was selected as "the outstanding program for large districts" during the 1990-1991 school year. At a school board meeting the gifted program coordinator, Mary Bass, and program facilitators were recognized. The superintendent also presented each teacher with a gift certificate to a local restaurant and a $3,000 check to the gifted program from the State Department of Education.

## Conclusions

Several components have influenced the successful practices found in Barbara and Carey's classrooms in the Sutton School District. Among these are the individual characteristics of the teachers, the presence of a strong, visible gifted program, administrative support, and state legislation that supports and recognizes outstanding gifted education programs. In addition, the overall atmosphere in both buildings is positive toward students and staff. Teachers are consistently supported and encouraged to use instructional practices that address the potential of all students, including high ability students.

A significant factor that supports the use of differentiated teaching strategies is each teacher's confidence in her own teaching ability. Effective teachers believe they can design appropriate and challenging activities to meet the educational needs of their students. Barbara Jones and Carey Foster are comfortable in trying new projects and possess an easy-going management style in dealing with student behavior. They seek opportunities that are challenging and enjoyable for their students and are interesting for themselves as well. While both teachers express concern that they have not attended staff development activities on differentiating the curriculum for gifted students, they indicate that they would probably benefit from additional training.

A strong gifted program in the district appears to increase the likelihood that regular classroom teachers and teachers of the gifted would share resources and ideas to provide appropriate curricular modifications for high ability students. Although the gifted and talented program facilitators in each building are relatively new teachers, each of them is committed to making the gifted program an integral part of the school's total education program. The district's gifted program serves more students than those that are formally identified and recruits classroom teachers to assist with program activities as judges or collaborators on special projects and competitions.

### Administrative Support

The district's gifted and talented program coordinator is viewed by the two building principals and the program facilitators as someone who is supportive of their efforts, well-organized, and effective in keeping each school informed and involved about program

activities. The school district's administrators are also conscientious about communicating information about the gifted education program activities and exemplary classroom practices in district newsletters, in the local newspaper, and at local service clubs. This positive communication and recognition has had an impact on teachers by motivating them to risk innovative instructional practices. The district appears to have a great deal of pride in the educational accomplishments of students and believes that the gifted education program supports that goal.

### State Policies

The State's Department of Education Program Approval Standards for Gifted and Talented had an impact on the successful practices in the Sutton School District. The state has certification requirements for G/T education, for G/T coordinators, and gifted and talented teachers that include a minimum of 18 hours of graduate course work in gifted education. The standards also require districts to document a comprehensive program in annual reports to the Department of Education. State legislation also provides for the annual recognition of outstanding gifted programs as judged by the Governor's Advisory Council for Gifted and Talented Education.

## Methodological Notes

This district was recommended by colleagues (i.e., university faculty members, persons working in gifted programs) as a district that they believed was effective in meeting the needs of able learners in the regular classroom. The Sutton School District has a reputation for implementing new practices and being open to new ideas. The State Department of Education's gifted education personnel also believed that this district employed effective strategies for high ability students.

Initially, I met with the Assistant Superintendent for Instruction and the Gifted Program Coordinator in the Sutton School District. I explained the purpose of the study and received tentative approval to conduct the observations. Both administrators recommended that I conduct the study at Franklin and Rogers Elementary Schools. Although only one site was sought, the Assistant Superintendent believed a second site should be included in the study. I made 26 visits to the two schools in the Sutton district with about 75% of that time equally divided between the two classrooms.

Although I would have enjoyed interviewing students, the procedures for obtaining permission for this were too time-consuming. The elimination of students' perspectives is a limitation, however. In addition to interviewing the teachers in each building, I interviewed the principals and the coordinator of gifted programs for the district. Also, I attended student productions, competitions, two gifted and talented faculty meetings, a school board meeting, and a gifted and talented staff party.

The primary source of data for this study came from observations and interviews. I transcribed field notes and interviews before each returning visit to the school and formulated new questions. I frequently asked teachers for clarification of district procedures, policies, or about an individual's perceptions. I reviewed and coded all data to determine the salient categories of findings. After I made a list of all categories, I noted the frequency of the strategy or finding. In addition to analyzing the interview and observation data, I reviewed several district and G/T program newsletters, newspaper articles, brochures, and special event programs to analyze the trends that had emerged from the transcribed/coded material.

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# CHAPTER 11: A Case Study at Woodland Elementary

Karen L. Westberg, Ph.D.

Imagine a classroom in which students have the opportunity to "test out" of the regular mathematics and spelling curriculum and are, instead, involved in exciting and meaningful alternative enrichment and acceleration activities. Imagine a teacher who knows how to organize and manage a heterogeneous classroom in which students work at their own pace. Imagine students who support their peers who may progress, at some times and in some content areas, faster than they. Imagine what schooling is like for students who go to school each morning knowing that they will not have to demonstrate the content and skills they already have mastered. This chapter focuses on the instructional and curricular procedures used by Beth Windsor who implemented these practices to meet the needs of high ability students at Woodland Elementary School. The setting, informants, findings, and conclusions will be described.

## Setting

Information about the community, school district, school, and classroom are provided here to describe the setting in which the case study took place.

### The Community

Woodland Elementary is located in Wells, a "suburban residential town" of approximately 35,000 people in the Northeast. Because of Wells' proximity to a large urban area, it is considered a suburban community; however, residents describe it as a town, and like many New England communities, it strives to maintain a rural appearance and identity. The 1990 census data indicate that Wells is a middle to upper level, socioeconomic community. For example, the median family income (which includes all family members over 15 years of age) was $80,167, and the per capita income was $26,062. The homes in the community are well-maintained, the lawns are well-manicured, and many homes are enclosed by stone fences. The 1990 census indicated that the median value of owner-occupied households in Wells was $241,968.

The majority of the residents in Wells are Caucasian-American (96.7%) and are employed by large corporations located in the region surrounding the community. The percentage of non-Caucasian students in Wells is substantially lower than the percentage of non-Caucasians (13%) in the state in which Wells is located.

### The School District

The Wells School District has an enrollment of nearly 5,000 students who attend five elementary schools (grades K-5), two middle schools (grades 6-8), and one high school (grades 9-12). One indicator of the students' academic strengths and high standings is their above average scores on standardized achievement tests. For example, the 1990 median basic composite score on the *Iowa Tests of Basic Skills* for third, fifth, and seventh grade students was at the 75th percentile. The median scores obtained by third, fifth, and seventh grade students on the *Cognitive Abilities Test*, using national norms, placed them at the 77th percentile on the verbal scale, the 68th percentile on the quantitative scale, and the 74th percentile on the non-verbal scale. Approximately 70% of the Wells students enter four-year colleges after high school, and less than 1% of the students drop out before

graduating from high school. These data clearly indicate that the students in Wells demonstrate above-average academic performance.

### The School

Woodland Elementary School is a large, two story brick structure that serves approximately 650 students in grades K-5. Because the building was once used as a junior high school, the classrooms are larger, the halls are wider, and the chalkboards are higher. It is obvious that one of the fifth grade classrooms was once a science room with its laboratory type shelves and attached office. The building has served as an elementary school for 17 years.

The school contains a computer lab with several Apple IIE computers and a few Macintosh computers. The computer lab is monitored by a parent volunteer who primarily helps teachers load software on the machines. The school district computer coordinator sets up the building computer labs and orders some of the software, and the district mathematics coordinator also purchases and distributes software to the schools. The computer lab at Woodland Elementary has an extensive collection of software programs; for example, it contained the entire Minnesota Educational Computer Consortium (MECC) collection of software.

### The Classroom

The study focused on a fifth grade classroom taught by Beth Windsor, one of four fifth grade classrooms in the school. Her classroom had a traditional appearance, with a teacher's desk in one corner, student desks (approximately 20 years old) arranged in groups of four, two computers, black chalkboards, book shelves filled with teaching and student resource materials, and large bulletin boards. The bulletin boards displayed announcements and students' written work, which had been typed by the students on computers. A large, green banner above the blackboard at the front of the classroom stated, "Welcome to Random Land."

Beth Windsor's classroom was comprised of 22 students, 8 female, 14 male. Nineteen students were Caucasian-American, one was Hispanic-American, one was Asian-American, and one was African-American. Two students in her classroom had limited English proficiency, a boy who had immigrated recently from Russia and a boy who had moved from China two years ago.

## Informants

Information from interviews and observations were obtained from several individuals in the school district, including the Beth Windsor, teachers, students, and administrators.

### Classroom Teacher

Beth Windsor is one of the fifth grade teachers at Woodland Elementary. Of the school's four fifth grade teachers, three work together by departmentalizing their instruction. Beth Windsor teaches mathematics, a second woman teaches science, and a third woman teaches social studies to all three classrooms. All three provide instruction in the remaining subjects to their homeroom students.

Beth Windsor has been teaching elementary age students for 20 years. She has a Bachelor's degree in elementary education, a Master's degree in reading, and was completing a Specialist's Degree in gifted education at the time of the study. She has taught students at several grade levels and has been involved in several professional growth experiences. For example, a few years ago she received a "teacher/researcher" fellowship to work for a semester with a national expert in whole language at a large, nearby university, and she recently attended a workshop on techniques for implementing the new mathematics standards sponsored by the National Council for Teaching Mathematics.

### Talented and Gifted Resource Teacher

Catherine Palmer is the elementary Talented and Gifted (TAG) Resource Teacher who provides services to the teachers and students at Woodland Elementary one day per week. She had been involved in the TAG program in the Wells School District for over 15 years. The program had experienced major cutbacks in recent years, the most severe of which occurred during the previous spring when two elementary TAG teaching positions were eliminated, leaving Catherine Palmer to service all five elementary buildings.

### Students

Two students, John and Philip, were interviewed for the study. Both students were receiving services from the district TAG teacher. John had transferred from another elementary school in the district where he had been formally identified for the district's TAG program in fourth grade. Philip had been informally identified by Beth in fifth grade to work with the TAG teacher.

### Principal

Mr. Roberts has been the elementary principal at Woodland Elementary for 17 years. He has been involved in education for 37 years, 22 years as an administrator. Prior to working as a principal, he was as an elementary teacher, including a few years as a teacher in a full-time gifted program in the district.

### Director of Pupil Services

Dr. Scully has worked in the Wells School District for four years as the Director of Pupil Services. The oversight of the gifted education program in the district was among his responsibilities. His previous position in a nearby school district also included supervision of a gifted program.

## Findings

Beth Windsor uses a variety of curricular differentiation techniques and instructional strategies to meet the needs of individual students and, in particular, the needs of the high ability students in her classroom. Among these techniques is a curriculum modification strategy entitled curriculum compacting (Renzulli & Smith, 1979; Reis, Burns, & Renzulli, 1992), which she uses to modify the mathematics and spelling curriculum. She employs an integrated whole language and process writing approach for her language arts curriculum. In addition to these curricular differentiation techniques, departmentalized teaching, higher level thinking skills, and student project work are used. The factors that influence her interest in and implementation of these practices include her graduate level training in education and the school policies that allow her to implement

them. The assistance of a parent volunteer and the existence of a TAG enrichment program also help meet the educational needs of high ability students. The findings obtained through interviews with Beth Windsor, two students, a TAG Resource Teacher, and administrators, as well as from observations in Beth Windsor's fifth grade classroom relative to the above topics will be explained.

## Curricular Modifications

Beth Windsor uses a curriculum modification technique entitled curriculum compacting (Renzulli & Smith, 1979; Reis, Burns, & Renzulli, 1992) to modify the mathematics curriculum with the students in her three fifth grade classes and the spelling curriculum in her homeroom. Beth learned about this technique through her graduate coursework in gifted education.

Beth Windsor sets the stage for curriculum compacting on the first day of the school year when she explains to her students how she will use it to provide them with appropriate learning experiences. She is able to do this because of her training and experience with curriculum compacting during the previous three years. She uses the actual term, curriculum compacting, when explaining the curriculum modification process to her students.

### Math Compacting

Upon my first arrival in Beth's classroom, she explains my presence to her students, and one child blurts out, "I tell everyone our math class is fun." While this comment seemed to be out of context, I soon learned that Beth is associated with mathematics instruction at this school. Beth Windsor teaches mathematics for nearly three hours per day because, in addition to her homeroom, she teaches mathematics to two other fifth grade classes. It may not be particularly unusual to teach mathematics to three classes per day, but it is noteworthy that she uses curriculum compacting in all three classes! Beth Windsor's procedure for compacting the mathematics curriculum involves, first of all, assessing what the students already know by administering chapter pretests from the Addison-Wesley mathematics series to her students. All students in her classes have the opportunity to take the pretests. Her criterion for mastery of the content and skills in a chapter is 90%. Students who achieve mastery on a pretest become members of the "compacted group" and do not receive instruction or do exercises on the material within that chapter. The students in the "compacted group" participate in enriched or accelerated alternative activities in mathematics, such as her "average fifth grader" project. For this project, the students, whose mathematics was compacted, obtained several linear measurements of their classmates in centimeters (height, wrist to elbow, waist to ankle, face width, . . . ), determined the arithmetic mean of these measurements, and drew "the average fifth grader" on large butcher block paper to depict the measurements. While the students in the "compacted group" work on this project, the remaining students are not just doing exercises from their mathematics text. Rather, the rest of the students are involved in a measurement activity from a mathematics enrichment book, an activity beyond the fifth grade level. Occasionally she gives the same assignment, brief lesson, or demonstration to the entire class, followed by different practice exercises or activities with the two groups. The student membership in the ad hoc groups (compacted and non-compacted groups) is flexible and changes frequently because the grouping is based on the instruction that students need to understand various mathematical content and skills.

Two students, John and Philip, explain how mathematics compacting works in their classroom. Philip says, "We take a pretest on a chapter, and if we get better than a 90% score, we don't do that chapter." When I asked him what they do instead, he replies,

"We move ahead a chapter or do other things with it or sometimes we do different work like the average fifth grader project." When asked if they liked compacting, they respond:

> It is fun. We don't have to do the same work as everybody. (John)
> I don't have to do math I already know. I get to skip part of it and move on. (Philip)

To the students in Beth's classes, compacting just makes common sense. Students are always working on different assignments in the classroom, and even though I have not observed students acting envious or resentful about what other students were doing, I asked students to describe their peers' views about compacting. John explains,

> Some kids don't make it, the 90%, and maybe they don't like it. I think kids are happy with it. Mrs. Windsor explained it at the beginning of the year. First, she said it was "harder work" and I wasn't excited, but after she explained it more, I liked the idea of compacting.

Toward the end of the school year, Beth Windsor has more than two groups of students in each mathematics class. In one of the classrooms, students are placed in one of three ad hoc groups and, during one of my visits, five students are working several chapters ahead of the rest of the class. Beth is meeting with the five students at a round table in the corner of the room and spends approximately ten minutes with them. During this brief time, she discusses ratio (something they were currently studying), and then, demonstrates how to use protractors to measure degrees in angles (which will come in the next chapter). Then, she dismisses the group by saying, "Do four pages [in the upcoming chapter on measurement of geometric figures]. Along the way, **you decide** which problems you need to do to help you understand measurement of triangles [emphasis added]." The noteworthy finding from this observation is not that one group is accelerated significantly ahead of the other two groups; rather, Beth is giving the responsibility to the students for their own learning. They accept this responsibility! While this is occurring, the other two ad hoc groups of students are working two chapters apart in their mathematics text, one on proportions and the other on fractions of whole numbers.

At the end of May, I asked Beth if she intends to do anything differently in mathematics the following year. She replies that she wants to "do more work on the management of mathematics compacting and develop learning centers for mathematics enrichment, one center for each quarter of the year." She indicates that the mathematics centers will be designed for everyone in her classroom and contain enrichment and acceleration replacement activities. She has decided already on the topics for three of the centers, namely, estimation, measurement, and tessellations. She hopes to be more definitive in placing students at the beginning of the year for compacting services. She states, "I suspect that some students could be working further ahead, and I need to do more for girls, encourage girls in math, for example, by having some Type Is [exploratory experiences designed to interest students in a topic]." Even though Beth Windsor has been providing curriculum compacting services to her students in a seemingly successful manner for some time, she is not satisfied with the status quo. She is already planning additional management strategies and content areas to explore in her classes in the upcoming year.

### Spelling Compacting

In addition to providing curriculum compacting in mathematics, Beth Windsor uses compacting in spelling with her homeroom students. Teachers in her district are required to use a basal spelling text, but she modifies the use of the text with her students. All students

in her room are provided with the opportunity to take a spelling pretest from the basal that covers the spelling material for one academic quarter (9-10 weeks). If the students demonstrate correct spelling for 90% of the words, they do not take any other spelling tests or complete any other spelling exercises for the entire quarter. Instead, these students participate in alternative language arts experiences; including, reading and discussing a Junior Great Books selection with a parent volunteer who spends every Monday morning in Beth's classroom.

When educators hear how spelling is implemented in her classroom, they usually ask immediately if the students, whose spelling work is not compacted, resent this or complain about this curriculum compacting procedure. As stated earlier, the students do not appear to resent it or complain about it. For example, John says that he doesn't take the spelling pretests because he knows that spelling is one of his weaknesses and that spelling instruction is necessary and important for him. Several classroom observations made during spelling "time," indicate that students are always engaged happily and responsibly in their respective activities. It should be noted again, however, that Beth Windsor sets the stage for this at the beginning of the year when she explains how curriculum modifications will be implemented in her classroom.

## Integrated Language Arts Program

The letters, R/W, are listed on the daily schedule on Beth's chalkboard. She uses an integrated language arts program with her students, and the R/W refers to reading and writing. She applies the training in whole language and process writing that she received when she studied with a whole language expert. Because a basal reading text is not used in fifth grade, Beth integrates her language arts instruction by using several supplementary language arts materials, often published by small companies or cottage presses. For example, she uses an exercise from *Insights Reading and Thinking: Comprehension Strategies* on how to determine mood clues from dialogue, and she asks the students to select a passage from the novel the class is reading to determine the mood being conveyed and to identify the element (setting, dialogue, body language, . . . ) being used to convey that mood. This is just one example of the alternative materials and the advanced instruction she uses with her students, instruction that is found more typically in secondary English classes.

Students in Beth Windsor's classroom have a variety of experiences with language. She uses an extensive amount of literature for language arts, but also provides what might be considered more traditional language instruction. For example, she works on vocabulary development and uses "daily oral language" exercises with students. In addition to exposing students to sophisticated literature and advanced skills, her students do a great deal of writing in journals both inside and outside of school. She requires her students to read one-half hour per night and write reactions in journals about their readings. She reacts to their entries once a week when students submit their journals. Through her extensive use of journals, Beth stimulates reflective habits of thought in her students.

A whole language approach may not be particularly unusual in classrooms today, but unlike many classroom teachers who profess to using a whole language philosophy in their classrooms, Beth Windsor uses differentiated instruction within a whole language approach. For example, all of her students spend several weeks reading a discussing the novel, *The Homecoming*. When reading this novel, she purposely selects activities that meet students' different learning styles and strengths. She even incorporates this in her final exam on the novel. Students answer all items on the exam, but she selects questions that appeal to students' different style strengths (abstract random, concrete sequential, etc.) based on Gregorc's Learning Styles. She was exposed initially to Gregorc's Learning

Styles at an inservice at her school and has since participated in several short courses and seminars with Tony Gregorc and Kathy Butler. Because of her strong interest in learning styles, she now conducts inservices for parent groups and community organizations on how to integrate an awareness of learning styles into family relationships and into procedures for meeting students' needs.

In addition to accommodating students' differing learning styles in language arts, she creates challenging activities to meet students' individual needs. She says, "Providing advanced content, advanced process, and advanced product work are very important to make learning more challenging for students and meaningful for individual students." To accomplish this, she gives choices to students as much as possible. For example, when students prepare book reports, they can present books by creating board games, dressing up as characters, conducting additional research, etc. Beth says, "I have tried to champion individual kids and celebrate their individuality."

### Departmentalized Teaching

As mentioned previously, Beth Windsor and two of her colleagues teach mathematics, science, and social studies in a departmentalized arrangement. The students go to three different classrooms for each subject for one hour each day. All three teachers favor the particular subject they teach. Although Beth has no special training in mathematics, she loves teaching mathematics, so much so that she volunteers to coach the Mathematics Club after school on Mondays. The two science and social studies teachers like their subject areas, but they are not as enthusiastic about their disciplines as Beth.

By teaching only one of three major subjects, the teachers save preparation time, which they believe results in more effective instruction. For example, the social studies teacher provides an extensive unit on the Revolutionary War Period and has students in all three classrooms prepare projects for a Colonial Fair held for an entire day in the spring. The students' projects are similar to science fair projects and include live demonstrations and exhibits. For example, one student provides a demonstration on how to make butter, one organized the boys into a militia, and another prepares the *Colonial Chronicle*, a newspaper reporting events during the colonial period. In addition to the increased *quality* of instruction in these subjects, the teachers believe that students benefit from the increased *quantity* of instruction. Beth explains that her students receive far more instruction in science and social studies through this arrangement. She admits that if she taught all three subjects, she would skip instruction in science or social studies some days.

### Higher Level Thinking

Beth's statement, "I want you to speculate, that is a synonym for guess, . . . " illustrates how Beth stimulates higher level thinking in her students. She uses informal strategies, such as using advanced vocabulary with students, but more importantly, she uses several indirect and direct methods for stimulating higher level thinking. Beth uses indirect methods for incorporating higher level thinking into all curriculum areas. For example, in the first sentence above, Beth is asking students to construct a story web indicating the choices available to Dicey, a character in the *Homecoming*, and to speculate about the consequences of going to various places if Dicey had taken them. Beth gives her students many opportunities to practice the skills of speculation and prediction, even when she has students do an activity to improve their interpersonal relationships in the classroom. On one occasion, Beth says,

> Pretend that the characters Sam and Dicey in the *Homecoming* came to our lunchroom. Would you ask them to sit by you? Would you play with them at

recess? They would look very different here. Write about this, and please try to be as honest as you can.

Beth provides opportunities for her students to engage in higher level thinking all day long. One of the ways she does this is by asking questions throughout the day that are at the higher levels of Bloom's Taxonomy; namely, application, synthesis, analysis, and evaluation.

Beth also uses direct teaching strategies for stimulating students' attainment of higher level thinking skills. She selects higher level thinking exercises or activities from the supplementary language materials in her room, such as exercises on analogical thinking from Midwest Publications. Beth uses higher level thinking in mathematics as well, for example, she teaches students how to use and understand Venn diagrams.

Although it appears that Beth knows intuitively how to include the direct and indirect teaching of thinking skills into the curriculum, she and the other teachers at her school had the opportunity to receive training a few years ago on the *Talents Unlimited*, a national thinking skills program developed by Carol Schlichter at the University of Alabama. Beth applies this specific training and the information and skills she has gained through other professional development experiences to stimulate the development of thinking skills in her students.

## Student Projects

Beth Windsor is a strong believer in project-based learning. She uses projects as much as possible in her classroom and believes that students who work with the TAG Teacher, Catherine Palmer, should be engaged in project work. At the beginning of the year, she encouraged Catherine to make some changes in the services provided to the students involved in the TAG/Resource Program, the district's gifted program that provides services to students for two hours per week. Beth suggested that Catherine use a book describing scenarios in the future to stimulate students' interest in working on projects. Catherine accepted the suggestion and asked the TAG students to develop projects for lunar space colonies in the Year 2020. After discussing aspects of life on the moon, students selected topics, such as transportation, energy, and education; conducted research; and developed solutions to potential problems on lunar colonies. Beth explains that she doesn't have enough time to provide the high ability students with sufficient resources and time to work on major projects, and she believes that students should have the opportunity to do this in the TAG program. Unfortunately, the TAG program has experienced cutbacks, and Catherine Palmer is able to spend only one day per week at Woodland Elementary. Beth provides time on Mondays and Wednesdays for the TAG students to work on the projects in their homeroom. These students view independent projects as something that is special about the TAG program. When asked how the work in Mrs. Palmer's classroom differs from Mrs. Windsor's, John says, "It is the projects. It is work on things of our *own* interest" [emphasis was his]. Again, it should be noted that students have this opportunity because Beth encouraged the TAG teacher to make changes in the program. In previous years, the TAG teachers in the district taught prescribed instructional units to students.

Beth encourages students in her homeroom to develop projects that are related to mathematics and language arts because she doesn't teach science or social studies. For example, she has students work on projects in conjunction with a cluster of baseball stories that students are reading. For this project, two young girls telephone a former athlete who was a pioneer in softball history and invite her to their school for a demonstration. Beth says, "That's the kind of thing I would like to see happening in the classroom—projects

that break new ground, projects that incorporate things we have learned, projects in which kids follow their interests."

## Themes

Several successful practices were observed in Beth Windsor's classroom. Why were these practices occurring in her classroom? Was it due to just her individual style and personality? What were the other factors that influenced her use of various instructional strategies?

After spending several months at this site, I came to the following three conclusions. First of all, Beth Windsor has a student-centered classroom, not a curriculum-centered one. If students already know the content or how to do something, she modifies the curriculum and has the students learn new material! Her use of curriculum compacting procedures reflects this philosophy. The students are the central focus for her efforts, not a teachers' plan book or curriculum guide. Second, Beth isn't satisfied with the status quo, she makes changes constantly in her teaching strategies and classroom practices, even when it means experimenting with new techniques, and especially when it means working hard! She is not afraid to take risks and take on new challenges. And after implementing new practices, she reflects and plans modifications for "the next time." Third, Beth believes it is important to make special efforts for meeting the needs of capable students. While her actions demonstrate a concern about the development of talent in all students, she does not expect the high ability students to "learn it on their own." Beth acknowledges it isn't easy to provide for bright students in the regular classroom, but she believes it is worth the effort. She says, "I don't think it is humanly possible to do all that should be done for bright kids in the regular classroom. I have tried. It is constantly a struggle to meet the needs of these kids."

Why does Beth believe these things and act on these beliefs? While it may be largely attributable to her own unique teaching style and personality, her professional development experiences seem to have had a significant influence on her classroom practices. She has had the opportunity to be exposed to a variety of instructional strategies through several, different inservice opportunities over the years. The school district provides several "staff development" days throughout the year in which teachers have the opportunity to select mini-courses that are of interest to them. These are not single session workshops, but continuing sessions. In addition, Beth has pursued advanced graduate level training in several areas, including reading, whole language, and gifted education. She is interested in learning about new techniques and practices, but more importantly, she applies this training.

Another influence on Beth's practices may be attributable to the lack of formal policies in her school district on topics such as grouping, acceleration, or departmentalization. And although the principal does not appear to be overtly supportive of Beth's practices, he doesn't hinder her efforts either. He observes her in the classroom quite regularly, but he doesn't provide her with much feedback. She says that he supports practices that seem to be directly related to scores on standardized achievement tests. He believes the district should be doing more to encourage the acceleration of students. He explains that when he taught in the full-time gifted program 22 years ago, elementary students were learning Shakespeare.

The social context of the school does not seem to have a particular influence on her practices. Beth doesn't socialize much or collaborate with her colleagues, inside or outside

of school, and explains that she doesn't believe many or any teachers in the school share her particular beliefs about teaching. Some of her colleagues express to me, however, the respect they have for her practices. When visiting with some of the teachers in the faculty lounge, I explained that I was spending several days in Beth's classroom. One of them replied, "You are here to see how it really should be done, right? Well, you are in the right place to see that."

Observations in Beth Windsor's classroom indicate that she has created an environment in a classroom at Woodland Elementary where students go each morning with the knowledge that they will not have to demonstrate previously mastered content and skills. They look forward to exciting and meaningful alternative enrichment and acceleration activities. They will have the opportunity to be challenged and to have some choices in what they will study. Perhaps some of the lessons from Beth Windsor can be put into practice in other classrooms throughout the country.

## Methodological Notes

A qualitative approach was used to gather the data for this case study. I visited the site one or two days per week over a four month period. The majority of the time was spent observing in Beth's classroom, but I spent some time in the other fifth grade classrooms, the playground, the TAG Resource Room, the faculty lounge, the computer lab, and the school library. In Beth's classroom, I tried to be as unobtrusive as possible by assuming an "observer-as-participant" role (Fraenkel & Wallen, 1993). Students were aware that I was gathering information for a study, and I didn't make a pretense of actually being a member of the classroom or staff.

In addition to conducting observations, I interviewed the informants previously described. Data were recorded as field notes and interview notes. A tape recorder was used when conducting some of the interviews, which were subsequently transcribed. The data were analyzed inductively for categories and themes that addressed the research questions for the study.

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# CHAPTER 12: Conclusions and Discussion

Karen L. Westberg and Francis X. Archambault, Jr.

As stated in Chapter 1, the purpose of this study was to conduct an in-depth investigation of schools and regular classrooms that have a reputation for their effective implementation of curriculum differentiation practices to meet students' individual needs. More specifically, we wanted to describe what teachers do to accomplish this goal and the factors that influence the implementation of these practices. While some of the profiles presented in Chapters 2 through 11 include findings that are unique to individual sites, there are some common findings and themes among them. The purpose of this chapter is to synthesize the findings and themes and discuss their potential implications.

The following commonalties emerged across sites: teachers' advanced training and knowledge; teachers' willingness and readiness to embrace change; teachers' beliefs and strategies for instructing individual students; collaboration (within grade levels, between gifted education specialists and classroom teachers, between curriculum specialists and classroom teachers); administrative leadership; and autonomy and support. These topics will be discussed below.

## Teachers' Advanced Training and Knowledge

After reading the site profiles, we noted that several researchers discussed the advanced training and knowledge of the classroom teachers who were the focus of the investigations. The majority of the teachers had graduate degrees, often in areas of special education or reading. For example, the fifth grade teacher at Forest Hills had a degree in reading; the fourth grade teacher at Maple Grove had a degree in special education; the teacher at Woodland had graduate degrees in reading and gifted education; and the entire team of fifth grade teachers at East Meadow had degrees in learning disabilities and gifted education. We believe it is not coincidental that these teachers—teachers with a reputation for effectiveness in dealing with high ability students—had training in various areas of special education, a field in which teachers focus on students as individuals.

Although every teacher did not have a graduate degree, all teachers had been involved in a variety of professional development experiences over the years. For example, several teachers had received training from their school districts on thinking skills instruction, whole language instruction, questioning strategies, and curriculum modification techniques, such as curriculum compacting. Inservice training was used by districts quite frequently to provide opportunities for teachers to learn new strategies, but teachers reported that they learned new techniques through a variety of professional development formats. Some teachers indicated that they learned about specific instructional strategies from mentors and co-workers. For example, the new fourth grade teacher at Maple Grove School indicated that he learned new techniques from his more experienced colleague, and a fourth grade teacher at Adams School said she worked closely with her co-worker to plan curriculum. Whether the training was formal or informal, the teachers applied what they learned through various professional development experiences to increase their repertoire of teaching strategies.

In recent years, educational leaders and reformers have been proposing that the improvement of education depends on teachers' professional growth. In fact, the National Education Goals 2000, adopted by the nation's governors and the President in 1989, was

modified in 1994 to include a new goal—the professional growth of teachers (Lewis, 1996). In discussing why professional growth is so essential, Barth (1990) said, "When teachers observe, examine, question, and reflect on their ideas and develop new practices that lead toward their ideals, students are alive. When teachers stop growing, so do their students" (p. 50). School districts are increasingly making a commitment to the professional growth of teachers, and they recognize that it doesn't occur in a couple of staff development days held each year. Instead, school districts are using a variety of formats and processes to develop long term professional development plans, such as peer coaching and collaborative action research. Furthermore, some school districts are using the new content, process, and context standards developed recently by the National Staff Development Council (1995) to guide school improvement efforts. For example, the process standard: "Effective elementary staff development uses a variety of staff development approaches to accomplish the goals of improving instruction and student success" (p. 23) may motivate schools to experiment with new forms of staff development.

In addition to being knowledgeable about various practices, it appeared that the teachers in the study were life-long learners who expressed curiosity about new topics, issues, and skills. Most of the teachers had been teaching for several years, and they continued to be interested in improving their practices. A teacher at one of the sites had 20 years experience, not one year of experience repeated 20 times. Educational leaders recognize that teachers who continue to grow are effective teachers. The importance of personal and professional growth was expressed by Barth (1990):

> Just as potters cannot teach others to craft in clay without setting their own hands to work at the wheel, so teachers cannot fully teach others the excitement, the difficulty, the patience, and the satisfaction that accompany learning without themselves engaging in the messy, frustrating and rewarding "clay" of learning. (p. 49)

The teachers in this study continued to learn and grow. The importance of focusing reform efforts on teachers' learning (e.g., values, beliefs, competencies) was underscored recently by Sergiovanni (1996) who said, " . . . making classrooms into learning communities for students will remain more rhetoric than real unless schools become learning communities for teachers too" (p. 139).

An aspect of professional development that has received attention recently is the need to provide different types of professional development experiences to different teachers. As teachers, we advocate providing differentiated learning opportunities to meet the unique needs and interests of students, but do school districts model this by providing differentiated professional development opportunities to meet the needs and interests of teachers? According to Barth (1990):

> The conditions under which each teacher learns are probably as varied as those under which students learn. We hear talk of matching learning styles of students with teaching styles of adults. It would be well to also contemplate the implications of different adult learning styles. (p. 54)

If more differentiated professional development experiences had been found at the sites in this study, perhaps even more "successful practices" would have been reported by the researchers.

## Teachers' Willingness and Readiness to Embrace Change

The researchers found that the teachers were willing to make changes in their practices. They did not teach as they were taught when they were students (at least we don't think they did), and they probably don't teach as they did when they were novice teachers. Several teachers indicated that when experimenting with new strategies, they realized that they will not be successful every time. The teachers may not all be risk-takers by nature; therefore, other factors influence their willingness to experiment with new practices, such as the culture of the school, an effective leader, or administrative support. Regardless of the factors, however, it is important to note that the teachers felt comfortable experimenting with new techniques, strategies, or materials. For example, the fourth grade teacher in the Sutton School District was comfortable taking on the challenge of participating in a national economics competition, and the fifth grade teacher at Woodland Elementary was efficacious about her ability to provide curriculum compacting services for students in three classes.

Because the teachers were *willing* to spend extra time and effort to make changes in their practices, they had the *requisite readiness* to make it happen. Fullan (1993) says, "If there is one cardinal rule of change in human condition, it is that you cannot *make* people change" (p. 23). The profiles indicate that several teachers spent many extra hours each week planning voluntarily with their colleagues and preparing instructional lessons and materials. The teachers' psychological and intellectual readiness for making changes appears to have influenced their practices.

## Collaboration

Three different forms of collaboration were reported in the site profiles. One form of collaboration was observed at sites where the teachers attributed their successful practices to collaboration with grade-level colleagues, such as at Adams School and East Meadow Elementary. A second form of collaboration was reported at sites where classroom teachers collaborated a great deal with the gifted education specialists in their buildings, such as at Franklin and Rogers Elementary Schools, Salisbury School, and Westhills School. A third form of collaboration was observed at Forest Hills Elementary School where the classroom teachers collaborated with the curriculum specialists to plan differentiated instruction for high ability students. The literature indicates that collaboration among teachers probably has a major influence on teachers' willingness to change their practices (Bennett, 1986; Dantonio, 1995; Hord, Rutherford, Huling-Austin, & Hall, 1987). In a federal report that summarized the research support for practices that impact teaching and learning, Bennett (1986) said, "Students benefit academically when their teachers share ideas, cooperate in activities, and assist one another's intellectual growth" (p. 51).

Most educators recognize that collaboration among teachers has a major impact on practices, however, having the *time* for collaboration is often a barrier. The teachers in the study who were involved in collaborative efforts were either *provided the time* or they *made the time* to collaborate with colleagues. Most of the teachers did not have sufficient time during the school day to plan with their colleagues. To remedy this problem, the teachers at East Meadow created Ol' Mexico nights, Wednesday evenings when they went out for dinner at a Mexican restaurant to debrief, discuss, and plan. Dantonio (1995) said, "Time for teacher collaboration must be important enough to be included in the school schedule" (p. 44). While not among the findings in this study, time for collaboration during the school day can be obtained through various ways, such as by having substitute

teachers rotate to release classroom teachers during the day, a principal take over teacher's classes, or special programs scheduled for combined classrooms.

It should be noted that the collaboration practices among colleagues in this study were self-initiated and voluntary. Some authors refer to the type of collaboration described in this study as collegial coaching, which Dantonio (1995) defines "a collaborative, self-initiated, egalitarian way for teachers to develop professionally" (p. 3). According to Friend and Cook (1992), collaboration includes: voluntary participation, parity among participants, mutual goals, shared responsibility for participation and decision making, shared resources, and shared accountability. Although collaboration was not found at every site, these characteristics describe the types of collaborations that were observed in the study.

## Teachers' Beliefs and Strategies for Differentiating Instruction

The researchers described a variety of strategies used by teachers to differentiate instruction for high ability students in the study. Although differentiation is defined in many different ways, it generally refers to various approaches that teachers use for accommodating students' academic differences by determining what students will learn, how students will learn, and how students will demonstrate what they have learned (Tomlinson, 1995). The majority of the teachers had an awareness of students' academic differences. They did not view students in their classrooms as a large mass; rather, they saw students as individuals with different skills, interests, styles, and talents. In addition, they were very aware of students' strengths, not just their weaknesses.

Because the teachers had an awareness of the academic diversity among students, they tailored their instruction to meet students' individual needs. They did not expect all of their students to complete all of the same pages in a textbook, at exactly the same times throughout the year, with the same readiness, and with the same outcomes. They did not believe it was important to "keep them all together." Instead, the teachers established high standards, made curriculum modifications, found mentors, encouraged independent investigations and projects, or created flexible instructional groups. Like the Army motto, they wanted their students "to be all they could be." And as masterful teachers, they knew how to select the appropriate strategies to meet unique needs.

In describing what differentiation is and is not, Tomlinson (1995) states that a paradigm shift is necessary to understand the role of a teacher in a differentiated classroom. In this paradigm, teachers are not dispensers of knowledge, but "organizers of learning opportunities." This is an apt description of the teachers in this study. For example, the fourth grade teacher at Maple Grove School organized a mentorship program for her students, the fourth grade teacher at Salisbury Elementary used learning contracts with students, and the teachers at Springdale School described the degree to which students had choices in their curriculum.

Although the teachers used various strategies to "organize learning opportunities" for meeting students' needs, they provided "challenges and choices" to students. Some teachers discussed their high expectations for advanced learners and their attempts to provide challenging material. Many teachers provided opportunities for students to pursue individual projects on topics of their choice. "Challenges and choices" may be a succinct, but clear explanation of differentiation. To illustrate this, we have asked adults to recall, first of all, their favorite subject in high school or favorite course in college and, secondly, to name why these were their favorite subjects or courses. Invariably, we have found that

their reasons have something to do with "challenges and choices." The most meaningful educational experiences appear to have challenges or choices associated with them. Many of the teachers in the study provided challenges and choices to their students.

By providing choices to students, the teachers stimulated students' interests and recognized the influence of interests on students' learning. A couple of the sites acted on this belief by adopting the Schoolwide Enrichment Model (Renzulli & Reis, 1985) to develop students' talent. Salisbury School used the Schoolwide Enrichment Model to provide enrichment to students in the regular classrooms and provide opportunities for students to pursue advanced investigations on self-selected topics with an enrichment specialist. Forest Hills Elementary also used the Schoolwide Enrichment Model as a guide for the types of enrichment experiences available to students.

Although educators have long advocated accommodating students' interests, this practice is used infrequently in classrooms throughout the country (Goodlad, 1984; Westberg, Archambault, Dobyns, & Salvin, 1993). Phenix (1964), an expert in curriculum development, said: "Students learn best what they most profoundly want to know. Their learning efficiency is in direct relation to their motivation. Hence, the materials of instruction should be selected in the light of students' real interests" (pp. 345-346). Some teachers in this study strived to provide instruction and curriculum to accommodate students' interests, which is a major strategy for differentiating the curriculum for advanced learners.

## Leadership

The researchers discussed the role of significant leaders in some of the site profiles. The influence of school superintendents was described, in particular, at Homer Elementary and Forest Hills Elementary. The superintendents at these two rural schools spoke publicly about the importance of providing programming for high ability students and were strong advocates of their schoolwide enrichment programs. The influence of a school principal was particularly significant in the profile at East Meadow, where Dr. Shelcroft was viewed by the teachers as a highly effective leader in the school who influenced their classroom practices.

In recent years, educational reformers have been advocating a different role for principals within learning organizations. These reformers would agree undoubtedly with Bechtol and Sorenson's (1993) description: "Good principals are willing to collaborate with teachers to experiment with new strategies" (p. 363). While not observed at all sites in the study, a number of principals had an impact on what the teachers were attempting to do to provide differentiated instruction for the high ability students in their classrooms.

## Autonomy and Support

Teachers discussed the autonomy and support they felt for implementing new practices. Some teachers were allowed to experiment with flexible staffing patterns. For example, the Woodland teacher and her colleagues were allowed to departmentalize their instruction, and they did not have school district policies that prevented them from engaging in various practices. Other teachers described the support they had for implementing new curriculum. For example, the teachers at East Meadow spoke about the principal's support for experimenting with "Enrichment Wednesdays." Their principal, Dr.

Shelcroft, stated that she "gets out of the teacher's way" when they want to try out some new ideas.

Many researchers discussed the supportive atmosphere or collaborative culture of the schools. In some cases, a special atmosphere was readily apparent, as at East Meadow where visitors to the school were provided with a brochure entitled "A Year of Excellence: It Takes All Three." A particular culture was observed in the three midwestern, rural schools and communities: Springfield, Eastville, and Westhills. Individuals in all three towns were strong supporters of education and the school buildings, and the schools' activities were the central focus of the communities. Peterson and Brietzken (as cited in "Collaborative Culture Supports Improvement," 1996) describe collaborative cultures as the following:

> The school culture is a complex web of norms, values, beliefs and assumptions, and tradition and rituals that have been built up over time as teachers, students, parents, and administrators work together, deal with crises, and develop unstated expectations for interacting and working together. (p. 1)

It appears that most, if not all, sites in this study had collaborative cultures that supported teachers as they worked to improve their practices and develop students' talent. Dantonio (1995) said, "In order to obtain competence in newly introduced instructional actions, teachers need extended opportunities to practice them in a safe environment before they can use them successfully with learners" (p. 12). Many teachers in the study worked in an environment that supported their students' as well as their own professional and personal learning, which brings us back to where we started this discussion, namely, with teachers' advanced knowledge and training.

We have discussed the following themes as being relatively common across sites: (a) teachers' advanced knowledge and training, (b) teachers' willingness and readiness to embrace change, (c) collaboration, (d) teachers' beliefs and strategies for differentiating curriculum, (e) leadership, and (f) autonomy and support. These factors may be somewhat linear; namely, the implementation of successful classrooms practices begins with teachers' advanced knowledge and training, which impacts teachers' willingness and readiness to embrace change. When teachers collaborate with others in their efforts to affect change, they implement various strategies for differentiating the curriculum. Furthermore, teachers are successful if they have strong administrative leaders who provide them with autonomy and support, which results in a belief system and school culture that supports the development of students' talent.

Many researchers noted or discussed a special atmosphere at the sites in the study. In general, they found that the atmosphere in these schools was pleasant and comfortable. Furthermore, they discovered a supportive attitude toward capable students. The following statement made by John F. Kennedy exemplifies this attitude: "Not every child has an equal talent or an equal ability or equal motivation, but children have the equal right to develop their talent, their ability and their motivation" (cited in Ravitch, 1985, p. 141).

## Implications

The potential implications from the findings and themes for teachers, administrators, and policy makers who want to improve the learning of high ability students can be subsumed into one major category—professional development. School districts must increase their investment in the professional development of their teachers

and administrators and should realize that the limited funds they have been spending each year to provide teachers with a couple of "inservice days" have been often inadequate and in some cases even wasted. If we want to expand teachers' repertoire of instructional strategies—and increase the likelihood that teachers will actually use them in classrooms—a variety of *differentiated* professional development experiences must be provided. Just as we realize the importance of tailoring instruction to meet *students'* individual needs, interests, and learning styles, we must recognize that it is essential to tailor professional development practices to meet *teachers'* individual needs, interests, and learning styles.

Teachers should have the opportunity to determine the topics and the types of professional development experiences that will help them best meet students' individual needs. For example, teachers at one school may want to use independent study projects as a strategy for tailoring instruction to meet the needs of high ability students. Some of these teachers may have never assessed students' interests and should, therefore, receive assistance on how to develop and analyze student interest inventories. Other teachers on the staff may be ready to learn how to help students focus on questions worthy of investigation. Another group of teachers may be very comfortable with the initial phases of independent study, but want assistance with finding appropriate outlets for students' independent work. Furthermore, teachers may want to acquire new knowledge and strategies through different methods. For example, some teachers may want to learn more about independent study strategies by collaborating with peers, others may want to attend a conference, and some may want to conduct a collaborative action research project with a university colleague. While demonstrating respect for teachers' diverse talents and learning styles, policy makers and administrators can communicate high, but attainable expectations for teachers to acquire additional instructional strategies. Providing differentiated professonal development opportunities will accomplish this goal.

Formal or informal measures can be used to assess teachers' differing needs and interests. School districts can formally assess teachers' readiness for change by administering assessments such as the *Stages of Concern* instrument developed for the Concerns Based Adoption Model (CBAM), which assesses the intensity of teachers' concerns that about an innovation, such as awareness, informational, and collaboration concerns (Hord, Rutherford, Huling-Austin, & Hall, 1987). A variety of informal methods also can be used to assess the readiness of teachers for various differentiation practices. For example, a district could hire an individual to provide technical assistance by collaborating with teachers in grade level teams over a period of several months. This individual, often from a college or university, would meet informally with teams to determine, first of all, what the teachers already know about various differentiation practices and, secondly, determine what the teachers want to know and how they want to learn new strategies. The outside expert would provide resources and on-going feedback as the individual teachers experiment and implement new differentiation strategies. This example illustrates both an informal method for assessing teachers' needs, but also the benefits of providing long term, collaborative, and non-evaluative assistance for teachers as they acquire new skills.

Some teachers are more comfortable experimenting with new practices when an "outsider" is in their classroom providing feedback, while others may prefer working with a peer colleague. Just as we seek to honor students' diversity and preferences, we should honor teachers' diversity. We want students ultimately to be responsible for their own learning, and school districts should model this by giving teachers the responsibility for their own learning as they select the types of professional development experiences that will improve their classroom practices.

Although research informs us about the factors that can impact and improve teachers' practices, many school districts don't make a major investment in the development of teachers' talent. For example, few districts provide major financial support for working on a long-term basis with teachers who are learning innovative practices, and few provide the resources for teachers to attend worthwhile, national conferences. Furthermore, only a few school districts actually experiment with highly innovative practices for developing teacher growth. For example, how many school districts sponsor retreats in late August for teachers to support staff colleagiality and to support them as they develop plans for an upcoming school year? Other organizations and businesses recognize the benefits of staff retreats, why don't school districts recognize the potential benefits? Or, how many districts provide the resources for teachers to engage in collaborative or schoolwide action research projects? These are just a couple examples of new and unique professional development practices that may improve teaching and learning.

Teaching is a very isolated activity. Most teachers have the freedom to close their classroom doors, and we don't know specifically what happens within those classrooms. The Successful Practices Study permitted a peak into classrooms to describe what was occurring. As with all research, we must admit that this "peak" was limited. Time and scope are among the limitations in this study. An in-depth examination of classrooms limited the number of sites that could be studied. The potential existence of observer effects, which may have influenced teachers' and students' actions, is another limitation. And finally, we realize that a degree of observer bias exists in all qualitative investigations.

While we acknowledge these limitations, we believe this study served a useful purpose and its findings contribute to our collective understanding of the practices that teachers use to accommodate the needs of talented students in regular classrooms. *Typical* teachers tailor instruction to students' *similarities*; but truly *effective* teachers tailor instruction to students' *differences* as well as their similarities. The profiles reported in this research monograph shed some light on how effective teachers and schools accomplish this challenging task.

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