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Best Practices of National Board Certified Teachers and Non-Board Certified Teachers in Grades One and Two

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BEST PRACTICES OF NATIONAL BOARD CERTIFIED TEACHERS AND

NON-BOARD CERTIFIED TEACHERS IN GRADES ONE AND TWO

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ABSTRACT

Best Practices of National Board Certified Teachers and
Non-Board Certified Teachers in Grades One and Two

The education of children in America has been the cause of much debate and conflict. At the center of this debate is the need for quality teachers. The National Board for Professional Teaching Standards (NBPTS) was formed to advance the quality of teaching and learning by recognizing accomplished teaching. Teachers with this certification fit West Virginia's definition of a highly qualified teacher under No Child Left Behind. If the National Board Certification (NBC) itself is reason for the highly qualified designation then the classroom practices of those teachers should differ from those who have not gone through the certification process. This study examined the classroom practices of 10 teachers in grades one and two to determine whether their classroom practices differed in relation to their National Board Certification status. This study used a multi-site, qualitative, descriptive, and evaluative case study model to establish whether the 13 practices determined by research of Zemelman, Daniels, and Hyde (1998) were present in these 10 classrooms. This study found that teachers with National Board Certification more consistently demonstrated the use of 11 of the 13 practices. The NBC teachers put theory into practice in their classrooms. Further, this study demonstrated that beliefs expressed by the teachers were not always put into practice in their classrooms. The findings from this study imply that West Virginia's definition of highly qualified may need to be revisited since National Board Certification and satisfactory evaluations are not equivalent in terms of classroom practices.

DEDICATION

I dedicate this work to my loving husband, Daniel, who spent many days alone and provided support every step of the way as I studied and wrote to complete this dissertation. I also dedicate it to my sister, Barb, who read every word, offered suggestions for improvement, and as a National Board Certified Teacher inspired me to undertake this study.

ACKNOWLEDGEMENTS

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CHAPTER ONE: OVERVIEW OF STUDY

Introduction

The education of children in America has been the cause of much debate and conflict. At the center of this debate is the need for quality teachers. The educational reform movements of the twentieth century have centered upon the need for quality teachers based upon research which demonstrates the effects of a quality teacher on student achievement (Busatto, 2004; Fallon, 2003; Haycock, 1998; Mendro & Bembry, 2000).

This emphasis on quality teaching led to the formation of the National Board for Professional Teaching Standards (NBPTS) in 1987 (NBPTS, 2004c). The mission of this organization is to advance the quality of teaching and learning by recognizing accomplished teaching (NBPTS, n.d.). In order to do this, NBPTS defined what an accomplished teacher should know and be able to do and formed their research-based core propositions. From these core propositions the NBPTS developed standards that describe "the highest level of teaching in different disciplines" (NBPTS, 2004c, p.1). These standards form the basis of the assessment for teachers applying for certification.

Although the certification process includes standards-based performance assessments, specific classroom practices are not directly addressed in the national certification process (Berg, 2003). The NBPTS recognizes best teaching practices and acknowledges that National Board Certified Teachers (NBCT) should model these practices (Hamsa, 1998). Embedded in the standards for each certification level are practices that NBCTs are expected to exhibit in their portfolio entries.

The purpose of this study was to examine and compare the classroom practices of teachers in West Virginia, those with National Board Certification and those who have not gone through the certification process, but are considered to be highly qualified. To begin this process, this chapter will focus on educational reform which led to the emphasis on quality teachers, quality teaching, the National Board for Professional Teaching standards, and best classroom practices.

Background

Educational Reform

Public concern about the state of education rose sharply in 1983 following the report, *A Nation at Risk*. A wave of reforms immediately followed the report concentrating on tightening standards and increasing accountability, top-down reforms that ignored classroom teachers as a component (Hill, 1990).   Three subsequent publications, *High School: A Report on Secondary Education in America* by Ernest Boyer (1983), *Horace's Compromise: The Dilemma of the American High School* by Theodore Sizer (1992), and *A Place Called School: Prospects for the Future* by John Goodlad (1984) also criticized the schools, but proposed a different solution. Although many differences were apparent in their publications, one theme appeared in all, the need for "radical restructuring of American education, including the empowerment of teachers, to meet the needs of a changing society" (Hill, 1990, p. 4).   Bottom-up reform was the preferred approach. Boyer (1995) stated that excellence in education means excellence in teaching since teachers are the ones that meet with children every day.

A second wave of reform began with the reports of the Holmes Group and the Carnegie Task Force on Teaching as a Profession (Zeichner, 1991).   These reports

supported Boyer's assertion of teacher empowerment. The Carnegie Task Force on Teaching as a Profession recommended the establishment of a National Board for Professional Teaching Standards (NBPTS) "that would establish high standards for what teachers need to know and be able to do and to certify those teachers who meet those standards" (Harman, 2001, p. 1).

The reform movement continued with the Goals 2000: Educate America Act which revitalized the reform efforts with its distinctive comprehensiveness (Rink & Williams, 2003). This broad framework for reform reflected the commitment of the 50 state governors for academic standards, tools, and technology for higher student achievement (Clinton, 1994; Goals 2000, 1996; Vinovskis, 1999). One of the goals addressed was giving teachers access to the knowledge and skills required to do an effective job through preservice training and professional development (Learning Point Associates, 1996). The funding for this bill was discontinued when the next reform phase began with the No Child Left Behind legislation (Minner, 2001).

This latest reform intended to provide all children with access to high-quality education. The major focuses of this legislation are reading, high-quality teachers and instruction, and ensuring that all children learn English (U.S. Department of Education, 2002). Highly qualified and well-trained teachers are mandated under this law (Sclafani, 2002). This mandate comes partially as a result of research that traced the performance of a student through the grades and concluded that teachers make a difference in achievement (Archer, 1998; Fallon, 2003; Haycock, 1998; Mendro & Bembry, 2000).

Quality Teaching

Since quality teaching is one of the most important factors in student performance it follows that there is a need to identify quality teaching and teachers (Darling-Hammond, 1997; DeLeon, 2003; Goldhaber, 2002; NCTAF, 1996; Stronge, 1997). As Minner (2001) stated, "what teachers know (or do not know) and what they do (or do not do) makes all the difference in the world of learning" (p. 33). The question of what makes an effective or quality teacher is difficult since the findings are mixed. Some studies suggest the difference is the teacher's verbal ability while others suggest it is the coursework they have completed (Ashton & Crocker, 1987; Darling-Hammond, 1999; Evertson, Hawley, & Zlotnik, 1985). The National Board for Professional Teaching Standards (NBPTS) has tried to answer the problem of identification of high quality teachers.

National Board for Professional Teaching Standards

The mission of the NBPTS, in addition to the high standards, included establishing a voluntary system for assessing and certifying teachers and advancing educational reforms to improve student learning (Harman, 2001). The NBPTS is an organization run by teachers and is meant to improve teaching and to recognize advanced practices. Accomplished teachers can achieve national certification through a process of performance-based assessments and a series of written exercises. The National Board's standards are based on research that recognizes sound educational practices resulting in improved student achievement (NBPTS, 2002).

The standards developed by the NBPTS (2000) are based on five core propositions: (a) teachers are committed to students and their learning, (b) teachers know the subjects they teach and how to teach those subjects to children, (c) teachers are responsible for

managing and monitoring student learning, (d) teachers think systematically about their practice and learn from experience, and (e) teachers are members of learning communities (pp.3-4). Acquiring NBPTS certification is a voluntary process that provides teachers a way to attain an achievement level that can make a difference in classrooms and careers (Helms, 2001). It is a course of action developed by teachers for teachers and takes at least one year and approximately $2300 for a teacher to complete.

Through the process of national certification teachers often need to change their practices to encourage higher level thinking skills and student-centered approaches and may be called upon to make changes in their fundamental beliefs (Crawford, Hjelm, & Mohor, 2003; Kimball, 2001). Berg (2003) maintained that National Board Certified Teachers (NBCTs) are better for students, well-trained, able to change the culture of mediocrity, and their research-based practices increase the quality of learning experiences for children. Research conducted by the National Board for Professional Teaching Standards and private researchers have demonstrated that students with NBCTs achieve at higher levels than their counterparts with teachers without national certification (Bond, Smith, & Baker, 2000; Goldhaber & Anthony, 2004; Vandervoort, Amrein-Beardsley, & Berliner, 2004).

Although there is widespread agreement among some researchers on the effects of a National Board Certified teacher on student achievement, there is also a growing consensus that these teachers are not more effective than those without the certification (Archer, 2002; Podgursky, 2001a). A study conducted by Dagenhart (2002) on the perceptions of teachers' needs and wants for a successful classroom, concluded that the lack of the national certification was not necessarily indicative of the lack of effective

classroom practices. However, specific practices were not identified in the study nor were classroom observations conducted.

Detractors point to the financial cost of the process for teachers and states alike (Richard, 2004). Over the past 10 years, it has been estimated that NBPTS has spent over $165 million in private and public funds to formulate the assessment process (Education Consumers Consultant Network, 2002a). This does not include the investment of the individual teachers and states in paying for the process or incentives for teachers.

Classroom Practices

Along with the difficulty in defining quality teaching is the difficulty in defining best classroom practices. Fenstermacher and Richardson (2005) concluded that "quality teaching, it appears, is about more than whether something is taught. It is also about how it is taught" (p. 189). The NBPTS presents a description of accomplished teaching and recognizes outstanding teaching (NBPTS, n.d.). In defining what excellent teachers should know and do they did not spell out specific classroom practices that these teachers should endorse (Berg, 2003). The skills needed for today's world cannot be attained through passive, rote learning; students must be challenged (Darling-Hammond, 1997; Stronge, 1997; Toch & Daniel, 1996). Extensive research has been done on instructional strategies and classroom practices that create a more effective classroom (Berends, 2004; Fullan & Rolheiser, 2002; Minner, 2001; Walberg & Paik, 2004; Zemelman, Daniels, & Hyde, 1998).

Zemelman, Daniels, and Hyde (1998) took much of this research as well as the standards of the content oriented professional organizations and synthesized it to develop a list of best classroom practices. The organizations involved in the research included the

National Council of Teachers of Mathematics, the National Council for the Social

Studies, the American Association for the Advancement of Science, the National Science

Teachers Association, the National Council of Teachers of English, and the International

Reading Association. Thirteen interlocking principles were developed as a result of this

research: effective teachers use practices that are (a) student-centered, (b) experiential, (c)

holistic, (d) authentic, (e) expressive, (f) reflective, (g) social, (h) collaborative, (i)

democratic, (j) cognitive, (k) developmental, (l) constructivist, and (m) challenging.

   Although the specific terms were not necessarily the same, other researchers found

similar principles in linking classroom practices to achievement (Brophy & Good, 1986;

Hardiman, 2001; Knapp & Shields, 1995; Pape, Bell, & Yetkin, 2003; Protheroe, Lewis,

& Paik, 2002; Waxman, Huang, Anderson, & Weinstein, 2003; Wenglinsky, 2002).

Student achievement increased when teachers presented challenging tasks that required

students to link to prior knowledge, when a variety of strategies were present, when

student-teacher and student-student interactions were present, and when higher-order

thinking skills received emphasis. Characteristics of effective classrooms included

students engaged and using knowledge outside the classroom as well as students involved

in problem-solving and discussion at levels suitable for their needs and developmental

levels. The central ideas remain the same, demonstrating the 13 principles identified by

Zemelman, Daniels, and Hyde (1998).

Problem Statement

   Research has shown that student achievement is linked to teacher quality. The

educational reform movement has emphasized teacher quality in the past and continues to

do so with the No Child Left Behind legislation which requires a highly qualified teacher

in every classroom. Each state is expected to define what constitutes highly qualified.

Under the High Objective Uniform State Standard of Evaluation (HOUSSE) section of

the No Child Left Behind legislation, West Virginia has identified a highly qualified

teacher when the teacher is not new to the profession. To be considered highly qualified

one must have one of the following: (a) a rating of "meets standards" or higher on

Section I of the Teacher Evaluation Form, (b) have a minimum of 21 hours of

coursework in a single content area toward a degree, (c) have a master's degree or

doctorate in the content area, or (d) be certified by the National Board for Professional

Teaching Standards (WVBE Policy 5202 as defined in §126-136-8). Because the

determination of highly qualified can be based solely upon National Board Certification,

it is important to demonstrate that the classroom practices of teachers who successfully

complete the certification process are different from teachers who have not completed the

process. Teachers who go through the certification process invest at least a year of their

time and $2300. This degree of time and financial commitment on the part of teachers

and states raises the question, are classroom practices of these teachers different from

those of other teachers? Is National Board Certification truly indicative of a highly

qualified teacher as demonstrated by their classroom practices? If student achievement is

higher in classes taught by National Board Certified Teachers, as evidenced by some of

the literature, is it because best practices are in evidence more than in classrooms of those

teachers who have not completed the National Board process? The purpose of this study

was to examine and compare the classroom practices of 10 teachers in West Virginia,

five with National Board Certification and five who had not gone through the

certification process, but are considered to be highly qualified.

Classroom practices of teachers who had successfully completed the process were compared to the classroom practices of teachers who had not completed the National Board Certification process.   These best classroom practices have been identified by Zemelman, Daniels, and Hyde (1998) using standards and recommendations from the National Council of Teachers of Mathematics (NCTM), the National Council of Teachers of English (NCTE), the National Science Teachers Association (NSTA), the National Council for Social Studies (NCSS), and the International Reading Association (IRA).

Operational Definitions

For the purpose of this study, the following operational definitions were used:

1. National Board Certification: the certification process developed by the National Board for Professional Teaching Standards to recognize excellence in teaching. It is an extensive series of performance-based assessments that includes teaching portfolios, student work samples, videotapes and thorough analyses of a teacher's classroom teaching and student learning. In addition, teachers must successfully complete a series of written exercises that probe the depth of their subject matter knowledge.

2. Best Practices: the 13 principles identified by the research of Zemelman, Daniels, and Hyde (1998), based upon the standards of the national organizations in the core subject areas of reading/language arts, math, science, and social studies. These include student-centered, experiential, holistic, authentic, expressive, reflective, social, collaborative, democratic, cognitive, developmental, constructivist, and challenging.

3. Student-centered: instruction that builds on a student's natural curiosity in which students can investigate his or her own interests in an atmosphere that balances teacher led experiences with student led experiences. Indicators: student questions provide direction to instruction, student created goals, lists or discussions on topics of student interest

4. Experiential: instruction that is hands-on, active and concrete and allows students to work with objects, real texts, group projects, and experiments to draw conclusions and discover implications. Indicators: reading whole texts, using manipulatives, conducting experiments, role-play, debate, graphing with M & Ms

5. Holistic: instruction that allows mental connections through integration of information in the context of real life. Indicators: grammar skills taught using actual writing samples not sentences in isolation, read whole books and use to discuss parts, whole-to-part activities such as read word and then discuss letters and sounds

6. Authentic: instruction that allows students to investigate ways to do activities for real purposes. Indicators: discussion relating text to self or text to world, math activities dividing a pizza or cookies among classmates, problem-solving real situations such as a playground conflict

7. Expression: instruction that allows students to employ a whole range of communication including, but not limited to speaking, writing, drawing, dancing, poetry, and drama. Indicators: opportunities for dramatic expression with dance, art, or drama, think/pair/share activities, writer's chair, skits or performances

8. Reflective: instruction that allows and encourages students to reflect or debrief about experiences and activities. Indicators: journals, learning logs, review of the day discussion, what did you learn from …?

9. Social: instruction that is interactional and allows students to construct and explore hypotheses through social interaction. Indicators: discussion among students, discussions with teacher or another adult, peer review of work, opportunities for play and interaction, buddy reading

10. Collaborative: instruction that allows learning from one another including group problem-solving and discussions. Indicators: working with other students to complete a project, conducting a science experiment with partners, problem-solving activities in a small group setting

11. Democratic: instruction based upon society where students make choices about books to read, topics, and activities. Indicators: students part of decision-making process, students have opportunities to choose books, activities, or topics, evidence of community – dealing with conflicts, diversity, discipline

12. Cognitive: instruction that encourages understanding through higher order thinking including metacognition. Indicators: questions that go beyond memorization, opportunities to analyze, interpret, create, or categorize, what do you do to get the answer or how did you get the answer?

13. Developmental: instruction that is age appropriate showing respect for emerging capabilities. Indicators: differentiated instruction, evidence of multiple intelligences, time allocation varies, formative assessment

14. Constructivist: instruction that allows students to recreate and reinvent content through experience, immersion and engagement. Indicators: students develop their concepts and ideas, not given by teacher, student evaluation of learning, application of learning to a new situation

15. Challenging: instruction that gives choices, decisions, and provides a safe environment for experimenting with increasingly difficult tasks. Indicators: build on prior knowledge, formative assessment to determine level, decision-making opportunities, safe environment for making mistakes – lack of criticism for trying

16. Context: this term refers to the classroom arrangement, the number of students in the class, the time of day, the grade level, the subject being taught, and distractions and/or interruptions in the classroom.

17. Consistent evidence: this term came out of the observations conducted during the research phase of this study. It refers to instructional practices that were in evidence on at least three days during the four day observations.

18. Evidence: this term came out of the observations conducted during the research phase of this study. It refers to instructional practices that were in evidence at least two days during the four day observations.

19. Slight evidence: this term came out of the observations conducted during the research phase of this study. It refers to instructional practices that were in evidence only once during the four day observations.

Significance

National Board Certification is a symbol of teaching excellence and is a nationally accepted sign of quality in teaching (NBPTS, 2002). Many state governments, local

school boards, and teachers are investing a considerable amount of time and money in it. Betty Castor (2002), president of NBPTS, reported that this process of recognizing outstanding teachers has encouraged 47 states to offer nationally certified teachers financial incentives. These incentives range from partial payment of the registration fee to as much as $20,000 over a four-year period for working in a low performing school (http://www.nbpts.org/about/images/stateincen_sup.table.pdf). One of the 47 states offering incentives is West Virginia. The West Virginia Legislature agreed to pay each teacher attaining the certification $2500 a year for 10 years. Several West Virginia counties offer additional financial incentives to successful teachers.

The majority of the research that has been done on the impact of National Board Certification has been sponsored and/or supported by the NBPTS. This does not necessarily mean that it is biased, but does bring the question of bias to the forefront.

Independent research on certification focused on student achievement rather than teacher practices. Although the Pool, Ellett, Schiavone, and Carey-Lewis (2001) study began to look at teaching practices, the conclusions referred to student achievement, not best practices. Research indicated further study is needed to determine whether or not the classroom practices of teachers with National Board Certification differ from those of teachers without the national certification.

The National Board for Professional Teaching Standards has developed a set of core propositions they consider the foundation for excellence. These research-based propositions "are expressions of the effectiveness, knowledge, skills, dispositions and commitments of the accomplished teacher" (NBPTS, 2002, p. 4). All Board-certified teachers are expected to reveal mastery of these core propositions demonstrated by

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achieving the standards set forth at each certification level. Classroom practices embedded in these standards are not necessarily the specific best practices as identified by the research of Zemelman, Daniels, and Hyde (1998) but are similar in some cases (NBPTS, 2004b).

This study investigated whether grades one and two teachers in West Virginia with National Board Certification and grades one and two teachers in West Virginia without the national certification, but considered highly qualified, used the same best practices specified in the research on the universal principles of the National Council of Teachers of Mathematics, National Council of Teachers of English, National Council of Social Studies, National Science Teachers Association, and International Reading Association, in their classrooms (Zemelman, Daniels, & Hyde, 1998).

Limitations

This study was limited by the fact that only 10 classrooms were observed, five with National Board Certified Teachers and five of teachers without national certification. These 10 classrooms included only first and second grades in West Virginia. This gave a picture of 10 first and second grade classrooms, but did not allow for generalization into all classrooms in West Virginia. Grades one and two were chosen due to the similarities of the content standards and objectives, the similar developmental levels of the students, and the NBPTS certification area of Early Childhood Generalist. With the small number involved one or two teachers in each group could have an impact on the findings.

The study may have been limited by the natural interaction between the observer and respondents that occurs during an observation. Lincoln and Guba (1985) recommend this be exploited to allow for "a level of mature judgment" (p. 103). Thus the limitations

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included the possible bias of the observer as well as the observed. Researcher bias was a factor due to the qualitative nature of the study. However, the qualitative nature also limited the amount of teacher bias. Teachers' practices were observed through one lens rather than the different lenses of several teachers who may not have had the same definitions for best practices.

The following chapters of this study provide information on the literature basis for this research, the methods used in the research, the results of the study, the implications for classrooms, teachers, and education in general, and recommendations for further study.

CHAPTER TWO: REVIEW OF THE LITERATURE

Education reform has been the subject of discussion, research, conversation, and legislation particularly since the release of the National Commission on Excellence in Education's report, *A Nation at Risk* (NAR) in 1983. Many in education felt that after the initial, typical uproar related with a report of this type, the business of education would go back to the conventional and traditional ways (Gardner, 1994). Over 20 years later reform is still a topic for researchers, educators, and politicians. DeLeon (2003) contended that America was still at risk and that the business of reform was unfinished. Vartan Gregorian, president of Carnegie Corporation of New York, pointed out that despite the discordance among voices of reform, "America has created and sustained the most successful experiment in mass public education in human history . . ." (DeLeon, 2003). To support this contention that we are becoming more successful, Darling-Hammond (1994) extended the notion that articulation of what a good teacher can do and knows is a step toward the attainment of the ultimate goal of school reform, to reach all students. The reform movement must reach into the classroom to flourish (Finn, 2003). This is happening through organizations such as the National Board for Professional Teaching Standards (NBPTS) (Darling-Hammond, 1994), created as a result of NAR and subsequent reports on educational reform (NBPTS, 2004a).   Studies have shown that quality teachers and quality instruction are essential to give students the best education possible (Fallon, 2003; Finn & Wilcox, 1999; Haycock, 1998; Wenglinsky, 2000).

The purpose of this study is to examine and compare the classroom practices of teachers in West Virginia, those with National Board Certification and those who have not gone through the certification process, but are considered to be highly qualified. To

create a background for this study it is important to consider several topics including the

educational reform movement beginning with the National Commission on Excellence in

Education (NCEE) report, *A Nation at Risk* (NAR*).* Viteritti (2004) contended that the

NCEE report, *A Nation at Risk* set the stage for ensuing studies and initiated the focus of

national attention on quality and accountability. Teacher quality and the National Board

for Professional Teaching Standards are issues of concern as well. The National

Commission on Teaching and America's Future (NCTAF) reported that teacher

knowledge of content, student learning and practices are vital elements of teacher

effectiveness and that teacher expertise is the most important factor in student

achievement.   The call for the revitalization of the teaching profession resulted in the

formation of the National Board for Professional Teaching Standards (DeLeon, 2003).

The final topic is best classroom practices.   Although often ignored in conversations,

Zemelman, Daniels and Hyde (1998) discovered that several unconnected, uncoordinated

research projects were being conducted to discern the best classroom practices. These

projects were the product of many of the national content organizations such as the

National Council of Teachers of Mathematics (NCTM) and National Council for Social

Studies (NCSS). The literature in each of these realms refers to teachers and their place

in the educational system as well as their effect upon student learning.

    This chapter focuses on the literature that addresses these issues, educational reform,

teacher quality, the National Board for Professional Teaching Standards, and best

classroom practices. The initial section concentrates on educational reform in the United

States. The next section deals with teacher quality, an outgrowth of educational reform.

The third piece addresses national certification of teachers, while the final area is an

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overview of the literature on best classroom practices. This chapter will examine various educational reforms and illustrate the role of an effective teacher using best classroom practices. This review begins with an examination of the literature on educational reform that has affected the teachers and their classroom practices.

Educational Reform Movement

The educational reform movement gained momentum in the 1980s marking a change in the way education is viewed in America. This section addresses a few of the major reform issues and reports over the last 25 years that have led to the need for further research into classroom teacher quality, National Board certification, and best practices.

A Nation at Risk

In 1981 Secretary of Education Terrel H. Bell created the National Commission on Excellence in Education (NCEE) to examine the quality of public education in the United States under the direction of President Ronald Reagan. The Commission's report, *A Nation at Risk,* described the level of education in the United States as mediocre and stressed the need for improvement in the overall educational system (NCEE, 1983). One recommendation of the Commission dealt with teacher quality, improvement as well as recognition for excellence and the assurance that time in the classroom is well spent (Harris, Handel, & Mishel, 2004).

Guthrie and Springer (2004) maintained that although *A Nation at Risk* was incorrect in its assessment of educational achievement, the repercussions of the report remain historic in that it motivated more significant change than any other event and played an important role in reshaping the federal government's role in education. The most positive result of this report was the move from school quality measured by the amount of

resources available to measurement through student achievement (Guthrie & Springer, 2004).   Changes were already being felt in the world of education when NAR was published. This report gave these changes momentum and set the stage for subsequent studies that continued to focus national attention on quality, accountability and teaching (Viteritti, 2004). Not only did the federal government assume a larger role, but NAR stimulated a surge of support from private organizations for innovative school improvement ideas (Goodlad, 2003).

In its report, the National Commission on Excellence in Education recommended strengthening core content areas, developing rigorous standards with high expectations, the effective use of instructional time, and quality teachers and instruction (Wong & Nicotera, 2004).   The recommendation concerning teaching is in seven sections each with a different focus, including salary increases, better teacher preparation, a longer contract period, the development of career ladders, incentives to attract outstanding students to teaching, resources to solve the areas of shortage (i.e. math and science), and master teachers to assist in developing teacher preparation programs (NCEE, 1983). These broad principles on improving education led to the formation of other research groups and reports such as the Holmes Group report, *Tomorrow's Teachers and Tomorrow's Schools* (1986).

Tomorrow's Teachers and Tomorrow's Schools

The Holmes Group, a consortium of 96 research universities with professional education programs in each of the 50 states, brought together a cadre of prominent school educators in 1986 to rethink teacher education, which was considered to be at the core of the problem of quality schools. Their report, *Tomorrow's Teachers for Tomorrow's*

Schools (1986), placed teachers "at the center of the education solar system, not as a satellite orbiting within that system" (p. 7). Several issues were presented in this report including the ineffectiveness of top down reform which the cadre concluded was of little value by the time it reached the classroom (Labaree, 1992). Teaching as a profession became the key piece of this report as they set forth their vision of good teaching. This included five goals: making teaching intellectually sound, recognizing differences in knowledge, skill, commitment levels of teachers, creating standards of entry into teaching, connecting schools of education with K-12 schools, and improving schools as a place for practicing teachers to work (Holmes Partnership, n.d.). This theme of teacher preparedness continued in the Carnegie Task Force report, *A Nation Prepared: Teachers for the 21st Century* (1986).

A Nation Prepared: Teachers for the 21st Century

Written in response to the issues presented in *A Nation at Risk* (NCEE, 1985), this report by the Carnegie Task Force supported the professionalization and empowerment of teachers as an answer to the dilemma of quality instruction. The Task Force concluded that America's future is directly linked to a quality educational system, and a successful educational system is directly linked to quality teachers (Hill, 1990). Empowering teachers and increasing their status, influence and control were thought to help increase student achievement and provide a higher quality education (Finn, 2003).

This led to the call for a redesign of the teaching profession and the formation of the National Board for Professional Teaching Standards to recognize and award teachers for reaching high standards in their profession (DeLeon, 2003). Teacher quality is viewed as a significant factor in increasing student achievement (Berg, 2003; Shakowski, 1999; The

National Commission on Teaching & America's Future [NCTAF], 1996). Therefore, teacher preparation and professionalism must be addressed in order to increase achievement which will result in a well-educated citizenry (DeLeon, 2003; Hill, 1990; NCEE, 1983). Quality teaching became the focus for the reform movement due to these findings as well as the realization that it was time to recognize that what is wrong with American schools could not be fixed without the support of those in the classroom (DeLeon, 2003; Hill, 1990).

Goals 2000

The Goals 2000: Educate America Act was signed into law on March 31, 1994 by President Bill Clinton, but the act had its beginnings at the Education Summit in Charlottesville, Virginia in 1989 under President George Bush (Austin, 1994; Goals 2000, 1996; Vinovskis, 1999). At the signing, President Clinton remarked:

> What this Goals 2000 bill does, believe it or not, for the first time in the entire history of the United States of America, is to set world-class education standards for what every child in every American school should know in order to win when he or she becomes an adult (Clinton, 1994, p. 1).

What made Goals 2000 distinctive was its comprehensiveness (Rink & Williams, 2003). As the reform movement created by *A Nation at Risk* slowed despite the lack of improved achievement, the Education Summit revitalized the efforts with the formation of a National Education Goals Panel and national goals (Vinovskis, 1999).

This rekindling of public attention to education led to the Goals 2000 legislation with eight goals for the year 2000. These included all children

entering school ready to learn, an increase in the high school graduation rate, all

students in grades 4, 8, and 12 demonstrating competency in all subject areas, the

United States being first in the world in science and math, all adults literate and

able to exercise their rights and responsibilities as citizens, all schools safe from

drugs and violence, teachers with access to knowledge and skills they need, and

school partnerships with parents to promote involvement and understanding

(Austin, 1994; Goals 2000, 1996; Learning Point Associates, 1994).

The broad framework for reform reflected the commitment of the governors

to the need for academic standards, tools, and technology for higher student

achievement (Clinton, 1994; Goals 2000, 1996; Vinovskis, 1999). Flexibility for

states was a key component of the bill with block grants given to states through a

simple four page application system (Austin, 1994; Goals 2000, 1996).

The goal of giving teachers access to the knowledge and skills required to do

an effective job was addressed through preservice training and professional

development. Resources for upgrading teacher skills would come from the block

grants and states would decide the specifics (Learning Point Associates, 1996).

All funding for this bill ended in June 2001 and the National Education Goals

Panel was discontinued as the new President Bush prepared for the next series of

reform through No Child Left Behind (Back to School, 2001).

No Child Left Behind

The latest in the list of educational reforms is the No Child Left Behind Act of 2001.

Secretary of Education, Rod Paige, stated that this law intended to provide all children

with access to high-quality education (U.S. Department of Education, 2002).   This

legislation impacts virtually every program under the Elementary and Secondary Education Act (ESEA) from Title I to Title IX, from disadvantaged students to quality teachers (Sclafani, 2002). The motivation behind this legislation is the supposition that schools were not doing well enough in the past and must do better in the future (Linn, Baker, & Betebenner, 2002).

No Child Left Behind (NCLB) is based upon four principles: stronger accountability for results, greater flexibility for states, school districts, and schools in the use of federal funds, more choices for parents, and an emphasis on research-based instruction. Reading, high-quality teachers and instruction, and ensuring that all children learn English have prominence in the legislation (U.S. Department of Education, 2001). Highly qualified and well-trained teachers are mandated by this law and it is the responsibility of school districts around the country to fill the classrooms with these teachers (Sclafani, 2002).

National Council on Teacher Quality

In his third annual report on education, Secretary Rod Paige clarified high quality teachers as those with a bachelor's degree, full state certification, and who have demonstrated subject mastery in each subject taught (U.S. Department of Education, 2004). Walsh and Snyder (2004) rated the states on three indicators concerning highly qualified teachers consisting of the effective identification of teachers without credentials, rigor, clarity and assessment, and then gave bonus points. Specifically, Walsh and Snyder looked at whether states isolated a teacher's academic qualifications to determine suitability of its High Objective Uniform State Standard of Evaluation (HOUSSE) option for identifying lack of certification. For rigor the indicators include coursework in subjects taught, objectivity of measures to determine subject matter

competency, and credit given for thorough subject knowledge. Clarity and assessment

deals with how the standards for highly qualified are written and explained and bonus

points are given for support states provide for teachers trying to attain the status of highly

qualified.

The number of educational reforms is countless and the reforms come in waves

(Darling-Hammond, 1997). Each educational reform provides its own version of success,

but in each case teacher quality plays an integral role. Studies on quality teachers and

teaching have received increased prominence due to the emphasis on quality in these

reform movements. Research that traces the performance of a student through the grades

and notes an increase or decrease in achievement when in the classroom of certain

teachers supports the notion that teachers make a difference in achievement, a major

concern of the reforms of the 1980s and 1990s (Archer, 1998; Fallon, 2003; Haycock,

1998; Mendro & Bembry, 2000).

Research on Quality Teaching

Teacher effectiveness and quality teaching are addressed in each of the reform

movements documented earlier. However, the dialogue did not stop with these reforms;

quality teaching continues to be a topic for discussion and debate.

Quality teaching is one of the most important factors in student performance

(Darling-Hammond, 1997; DeLeon, 2003; Goldhaber, 2002; NCTAF, 1996; Stronge,

1997). As early as 1966 in the Coleman Report, *Equality of Educational Opportunity*,

teacher effectiveness was found to account for the largest portion of variation in student

test scores (Goldhaber, 2002). The main issue in education is that all students need high

quality, effective teachers to make maximum achievement gains and reach high standards

(Darling-Hammond, 1997; Finn, 2003; Goldhaber, 2002). One of the first premises of the National Commission on Teaching and America's Future (NCTAF, 1996) is that the skills and knowledge of teachers have a significant impact on student learning (Darling-Hammond, 1999). This view is upheld by the results of research over the years (Darling-Hammond & Ball, 1998; DeLeon, 2003; Goldhaber, 2002).

Teachers have a profound effect on students and reform efforts can be hindered or maintained by the availability of quality teachers (Darling-Hammond, 1997; Stronge & Hindman, 2003). The difficulty that accompanies teacher quality is the lack of consensus on a definition of a qualified or quality teacher. Questions of how much education, what types of training, and which kinds of teacher preparation are necessary for a teacher to be considered qualified are a few of the controversies (Ingersoll, 2001).

The question of what makes an effective or quality teacher is difficult to address since the findings are mixed. Some studies suggest that a teacher's verbal ability is related to student achievement while others have determined that it is subject matter knowledge that is the answer (Darling-Hammond, 1999). Slavin (2003) claimed that instructional effectiveness is indicative of instruction coordinated around the learner, not the subject. A more reliably positive influence seems to be a teacher's educational coursework according to studies by Ashton and Crocker (1987) and Evertson, Hawley, and Zlotnik (1985). Darling-Hammond (1999) suggested that it may be the interaction of content knowledge and pedagogical knowledge that reinforces or diminishes teacher effectiveness. Cruickshank (1992) maintained that a teacher is judged to be good by significant others when the teacher meets their needs and that these significant others include students, parents, colleagues, administrators, and the public at large. In

Fenstermacher and Richardson's (2005) examination of teaching they distinguished between good teaching, which is learner sensitive and successful teaching, which is learner dependent, and asserted that successful teaching results in student learning.

The No Child Left Behind legislation defines a highly qualified teacher as one who holds a minimum of a bachelors degree, has obtained full state certification or licensure and has passed a rigorous state test to demonstrate competency in the academic subject taught (Joftus, 2002). For experienced teachers to prove this academic competency, Congress developed High Objective Uniform State Standard of Evaluation, or HOUSSE. Each state constructs its own HOUSSE plan to assess a teacher's content knowledge (Walsh & Snyder, 2004). West Virginia's HOUSSE plan recognizes highly qualified teachers as those who have attained National Board Certification, those who have successfully completed the appropriate PRAXIS assessment, or those who have satisfactory yearly evaluations as per West Virginia's evaluation system (Walsh & Snyder, 2004).

Conflicting information is evident in studies of quality or effective teachers. Some studies suggest a variety of aspects related to the teacher as reasons for effectiveness; however, consensus is not widespread. In researching teacher effectiveness, Darling-Hammond (1999) found a consistent result: the relationship between teachers and achievement when the teachers use a range of strategies and interaction styles rather than one single approach. She also concluded that a teacher's ability to deal with the more complex activities of higher level thinking and problem-solving are likely associated with all of the factors mentioned, verbal ability, educational experiences, subject matter knowledge, and strategies used. Stronge and Hindman (2003) maintained that there are

six domains that synthesize the research on effective teachers: (a) knowledge gained through education and experience; (b) the caring, motivated, dedicated person; (c) classroom management and organization; (d) instructional planning; (e) instructional implementation strategies; and (f) monitoring progress. Studies on the impact of teachers on student achievement and quality teaching are numerous and varied.

Cruickshank Study (1992)

In a study of research on effective teaching Cruickshank (1992) found that research prior to 1960 focused on the identification of teacher traits considered exemplary in the view of administrators and supervisors. Conclusions from this research found no general agreement on what constitutes the essential characteristics of a competent teacher and that character traits by themselves cannot predict effectiveness. He determined that since 1960 research has focused on identifying behaviors present when students are successful. These behaviors were observed in classrooms using an observation instrument to determine how and to what extent teachers perform a group of precise actions and the extent to which they are related to learning. Cruickshank found a lack of agreement on the outcome variables to establish effectiveness due to the innumerable goals for teaching. However, he created a composite picture of the findings including: (a) seek high goals, (b) provide learning activities at an appropriate level of difficulty, (c) teach systematically, (d) provide adequate opportunities to learn, (e) give immediate feedback, (f) task involvement, (g) teaching variety, (h) knowledgeable, (i) efficient, (j) tolerant, and (k) set and apply clear rules consistently. These studies were limited since they only tracked the frequency of the behaviors rather than the appropriateness, quality, and timing.

Kentucky Study (Meehan, Cowley, Schumacher, Hauser, & Croom, 2003)

Meehan, Cowley, Schumaker, Hauser, and Croom (2003) did a study in Kentucky to determine whether the Extended School Services program was addressing the needs of Kentucky's at-risk student population. This program allowed students to remain after school hours to receive tutorial services. The researchers attempted to identify differences in schools with large and small achievement gaps in an effort to close the gaps. Forty-eight schools in the district were divided according to the achievement gap between African American students, low socioeconomic students and the rest of the school. The schools chosen for the study all had the Extended School Services program in place. Eighteen schools were chosen based upon recommendations of the Extended School Services Coordinators and were divided into two groups based upon the achievement gap; nine were minimum-gap schools and nine were large-gap schools with three elementary, three middle, and three high schools in each group. All other demographics among the schools were similar. The study used checklists designed to collect data on essential elements of classroom behavior related to instruction, management, and context, and interviews with selected people. Specifically the researchers examined the quality of instruction, the appropriateness of the level of instruction, incentives, and the use of time.

Meehan, Cowley, Schumaker, Hauser, and Croom (2003) summarized the significant differences found in several specific areas. The findings favored minimum-gap schools and proved these schools made more efficient and effective use of time, used effective management techniques and appropriate pacing with more time on task. The minimum-gap schools had an inviting environment, free of risk and with fewer interruptions. In the

large-gap schools, teachers spent more time on routine administrative tasks and there was significantly less evidence of high expectations. There was a significant difference, in favor of the minimum-gap schools, in the quality of instruction, specifically information organization, transitions to new topics, restating essential principles, advanced organizers, and reminders of previously learned materials. Meehan used this information to make recommendations to the school district on how to decrease the achievement gap in the large-gap schools.

Prospects Study (Rowan, Correnti, & Miller, 2002)

The Prospects Study was a congressionally mandated study of educational growth and opportunity from 1991 – 1994 and contained a rich store of data on instructional processes and student achievement (Rowan, Correnti, & Miller, 2002). This study used longitudinal data over a four year period to evaluate the effectiveness of the Title I program (Puma, 2000). The data for the study came from 40,000 students' standardized achievement test scores in grades one, three, and seven, and questionnaires from students, parents, teachers, school principals, and district personnel in 365 schools over the four years. Although the findings indicated that Title I was insufficient to close the achievement gap, this study led to further investigation of the data.

Rowan, Correnti, and Miller (2002) used this data to estimate the overall size of teacher effects on student achievement and to understand why these effects occur. The original study showed little teacher effect on achievement, but these authors considered this as an underestimate of the overall effect and re-analyzed the data using a value-added procedure to adjust for prior achievement and home and social background.

Their findings showed only a small percentage of variance in rates of achievement growth among students and very different estimates of the overall magnitude of teacher effects. The classrooms to which students were assigned accounted for 60-61% of the reliable variance in the rate of growth in reading and 52-72% of growth in math. These results suggest that the teacher's effectiveness varies from subject to subject and that the cumulative effects of classroom placement on academic growth could be sizeable.

Rowan, Correnti, and Miller (2002) recommended that further inquiries be made into the properties of teachers and their teaching that produce positive student gains since the "important problem for American education is not simply to demonstrate that differences in effectiveness exist among teachers, but rather to explain why these differences occur and to improve teaching effectiveness broadly" (p. 1537).

Busatto Study (2004)

Busatto (2004) explored what educational practices made a difference in primary students' achievement in numeracy learning outcomes in 45 government and non-government schools in New South Wales. This was done using case studies that incorporated interviews with teachers, parents, students, and community members; observations of classrooms; and examinations of school documents.

The team of researchers found that the factors making a difference included language as a focus for learning, assessment used to identify and accommodate differences and a purposeful pedagogy. The strategies used to accomplish this were scaffolding, questioning, flexible grouping and addressing preferred learning styles. The most effective teachers employed hands-on materials, small group instruction, open ended questions, discussion during the lessons, differentiated teaching and learning, and

considerable interaction between teachers and peers. The recommendation of the researchers was to draw on these findings to improve numeracy learning across all schools.

Wang, Haertel, and Walberg Research (1993)

Wang, Haertel, and Walberg (1993) completed an analysis of 50 years of research on what affects student learning. They examined 179 handbooks and reviews, 91 research syntheses, and surveyed 61 educational researchers to come up with 11,000 statistical findings which provided a reasonable consensus on the most significant influences on learning. These researchers developed a 28 category conceptual framework based upon models of good learning. Combining the results of the research synthesis, content analysis, and expert survey results allowed the researchers to create a mean score for each of the categories. These 28 categories were then grouped into six types of influence and ranked accordingly. These six types of influence were: (a) student aptitude, (b) classroom instruction and climate, (c) context, (d) program design, (e) school organization, and (f) state and district characteristics.

The greatest impact was found to be the amount of time spent on a topic and the amount of time in social interaction between the teacher and students. Although student aptitude was actually the most influential, classroom climate and instruction were almost as high with the management aspect the most significant. Based on these findings Wang, Haertel, and Walberg (1993) concluded that the most influential effects on student learning were routines, monitoring progress, student/teacher interactions, class atmosphere, and the quality and quantity of instruction.

Wenglinsky Study (2000)

Wenglinsky (2000) examined data from the 1996 National Assessment of Educational Performance (NAEP) for eighth graders in math and science to determine whether teacher input (years experience, degree level), classroom practices (small group, hands-on), and professional development had an effect on student achievement. All information for the study came from the NAEP database which included test results from 7,146 students in math and 7,776 students in science, and questionnaires from teachers, students, and administrators.

The results of this study confirmed that all three types of teacher quality make an impact, but not equally. Classroom practices played the greatest role with higher order thinking skills and effective individualizing of instruction leading to improved student performance while there were no obvious benefits to small group instruction. The only teacher input that made a difference was whether the teacher had a major or minor in mathematics.

Wenglinsky (2000) noted some limitations to the study due to data being only from one grade level and only in math and science. He also expressed the possibility that the outcomes were influenced by other factors since there was no way to control for cumulative school effects or the fact that some students who might do well on tests were assigned to teachers with similar behaviors. Regardless, Wenglinsky concluded that the quality of teaching does impact achievement.

Podgursky (2001a) refuted the results of this study asserting that without longitudinal data there was no way to ascertain if teacher practices were not tailored to the academic skills of the student rather than the academic skills improving due to teacher practices.

He questioned whether higher-order thinking skills led to higher achievement or did teachers with higher achieving students emphasize higher-order thinking skills.

The question of basing conclusions on demographic data also concerned Podgursky (2001a) since the data came from a few questions on the survey. Students were asked for the educational level of their parents and the number of books and encyclopedias in their homes. Statistics on socioeconomic levels were determined from these answers. The findings about classroom practices were based upon teachers' responses to 21 practices listed on the survey. Podgursky dismissed the results of this research stating that, by asserting that teachers matter most, Educational Testing Services (sponsor of Wenglinsky research) means that a teacher with the right credentials, professional development, and classroom practices could, in theory, offset the effect of one standard deviation of low socioeconomic disadvantage.

Xin, Xu, and Tatsuoka Study (2004)

This study used the Trends in Mathematics and Science Study (TIMSS) data from 1999 to identify the effects of teachers on the process skills, reading skills, and mathematical thinking skills of their students. Xin, Xu, and Tatsuoka (2004) questioned the pay system being based on a teacher's degree, experience, teaching certificate, and sometimes test scores when there is no agreement on the existence of a teacher quality – student achievement relationship let alone an agreed upon definition of teacher quality.

Although not in full agreement with the traditional measures of degree, certification, and experience, the researchers used these measures since no other measurement seemed more valid. Rather than just using test scores as the output for the study, they also divided the test items in fields of knowledge and problem-solving activities to present a

clearer picture. Applying the rule-space model they identified specific knowledge and subskill attributes assumed to explain performance on test items. Given the pattern of correct/incorrect items performed by students a pattern of mastered and non-mastered attributes were inferred to determine a student's knowledge state. From this they developed a diagram of attributes of mastery probabilities to merge response patterns from different tests into a single database thus determining 27 cognitive skills and knowledge attributes involved in solving the mathematics items on TIMSS-99.

Data from Korea, Japan, the Netherlands, and the United States were used since these four countries' educational systems have similar characteristics, most teachers have bachelors or masters degrees and the students were mainly eighth graders. Researchers used only four of the eight tests because the others had an uneven distribution of attributes and might skew the results. They controlled for variables such as gender, age, parents' educational level, and the indices of Home Educational Resources, Student's Self-Concept in Math, and Positive Attitude towards Math which are rated as high, medium, or low.

The results showed that more than 50% of the variance for the United States and the Netherlands was accounted for by between teacher variance which is attributed to teacher quality differences. In Japan and Korea the between variance is much smaller than the within variance that is due to factors such as family income and parent education level. These differences were explained, in theory, by the private tutoring that is commonplace in Japan and Korea where teachers are responsible for only the basic skills.

Teaching experience, level of education, certification status and major had no effect on math or science achievement test scores nor any relationship with process, reading, or

math thinking skills. In the United States the years of teaching had a positive influence

for achievement but not on the three individual skills while in Japan the level of

education had a strong positive impact on all four aspects.

The results of this study were limited by the same factors listed in Wenglinsky's

(2000) study of NAEP scores; there is no way to control for previous achievement and

data is limited to one year. Also cited is the fact that a good student may have been

assigned to a good teacher, but even with this bias there was no evidence of a positive

correlation between teacher quality and achievement. Uncontrolled family variables

might also have an impact on the findings.

Researchers suggested a closer look at the practice of using teacher attributes to

determine the pay scale for teachers since the results of this study showed they had no

impact on math or science achievement and no consistent impact on any type of cognitive

skills. They further argued that this is a reason against using teacher credentials for

selection of new teachers.

Value-Added Research in Tennessee (Sanders & Horn, 1998)

The Tennessee Value-Added Assessment System was developed by William Sanders

to provide information for the state's education accountability system. This system

would ascertain the effectiveness of school systems, schools, and teachers in providing

academic growth. By focusing on gains over a one year period, researchers could

quantify a teacher's impact on student achievement. Although this system can help

identify strong or weak teachers, it cannot create good teachers (Zurawsky, 2004).

The Sanders model (Sanders & Horn, 1998) used "statistical mixed-model theory

and methodology to enable a multivariate longitudinal analysis of student achievement

data" (p. 249). Standardized test scores and end of course tests with high school students are accumulated over time and linked to the appropriate teachers, schools and systems using scaled scores to model the learning process. This provided information regarding the effectiveness of each of these entities in leading students to normal academic achievement over a three year period.

This study grouped teachers into quintiles based upon previous years' student gains, placing an equal number of teachers into each section based upon their ranking. Researchers tracked students for three years to determine their cumulative average gain. Since the results were linked to the teachers and teachers were labeled as least effective through most effective, results were examined in terms of the effectiveness of the teacher. Low achieving students in the least effective teachers' classrooms had average gains of 14 percentile points while those in the most effective teachers' classrooms had average gains of 53 percentile points.

Other findings included the fact that the effects of a teacher are long lived. Students with initially equal achievement levels had as much as 50 percentile points difference as a result of teacher sequence. The residual effects of an ineffective teacher were present even after having an effective teacher. Lower achieving students benefited from all teachers although as level of effectiveness increased the level of achievement increased. Only the most effective teachers had an impact on the high achieving group of students. Based upon these findings, Sanders and Horn (1998) determined that teacher effect is a major factor in student academic growth and should be addressed.

Mendro and Bembry Study in Dallas (2000)

Mendro, Dallas School District's executive director of institutional research undertook a study of 1500 teachers and 17,000 students to determine the teacher effects on student achievement (Mendro & Bembry, 2000). The teachers were ranked from least to most effective and divided into five equal groups according to their rankings. Teacher effectiveness was based on student gains on the Iowa Test of Basic Skills in the previous year. The study took into account students' race, ethnicity, poverty level, and English proficiency and tracked their test scores over a three year period.

The results of the study confirmed that students with more effective teachers made far greater achievement gains. The average reading scores for students with three of the most effective teachers in a row rose from the 59th percentile in fourth grade to the 76th percentile in sixth grade. Similarly, reading scores for students with three consecutive years of an ineffective teacher fell from the 60th percentile in fourth grade to the 42nd percentile in sixth grade. Math scores showed the same trend moving from the 55th percentile to the 76th percentile with three consecutive effective teachers and from the 57th percentile to the 27th percentile with three consecutive ineffective teachers. The results also showed that the effects of one ineffective teacher were still detectable two to three years later and that an excellent teacher could not undo the effects of a poor one in just one year. More importantly, Mendro and Bembry (2000) found that there was systematic bias in the placement of students in classrooms. As the years progressed he found that lower achieving students were consistently placed in the less effective teachers' classrooms.

Consensus

As evidenced by the results of these studies consensus on what effective or quality teaching is does not exist, but consensus is present that the teacher impacts a student's achievement (Sanders & Horn, 1998).   If teachers do have a long-lasting effect on student achievement then there needs to be an understanding of what constitutes an effective teacher (Stronge & Hindman, 2003). After synthesizing research on key attributes, behaviors, and attitudes of effective teachers, Stronge and Hindman developed six domains. These are: (a) advantages such as verbal ability, content knowledge, and certification; (b) personal attributes including caring, a positive attitude, and reflective thinkers; (c) class management and organization; (d) organizing for instruction which entails differentiation, clear goals, and limited disruptions; (e) implementing instruction with manipulatives, problem-solving, questioning, feedback, and guided practice, and (f) monitoring student progress. This became for Stronge and Hindman the meaning of an effective teacher.

Prior to Stronge and Hindeman's (2003) study, Sternberg and Horvath (1995) determined it was necessary to develop a model of the expert teacher and teaching expertise which is not equated with experience. They operated under the premise that all experts resemble one another and that a prototype view that represents the central tendencies of all exemplars could be developed. The experts have a knowledge base they bring to bear on problems, they are efficient problem-solvers, and have insight that allows them to arrive at novel and appropriate solutions. The experts are on the leading edge of knowledge and skill.

Because of the overall mediocre performance of students and the widening

achievement gap in schools, the educational reform movements pressed for higher

educational standards and student achievement. Researchers looked to teachers for the

answers and found that they indeed have the most impact on achievement (Darling-

Hammond, 1997; DeLeon, 2003; Goldhaber, 2002; Mendro & Bembry, 2000; NCTAF,

1996; Sanders & Horn, 1998; Stronge, 1997; Wenglinsky, 2000; Xin, Xu, & Tatsuoka,

2004). In the call for redesign and revitalization of the teaching profession a task force

formed to focus on teaching (DeLeon, 2003). This task force, the National Commission

on Teaching and America's Future (NCTAF), recommended the formation of an

organization to determine what accomplished teaching is, what teachers should know and

be able to do, and how to determine if teachers meet the standards set for an

accomplished teacher.

The National Board for Professional Teaching Standards (NBPTS) grew from this

idea that teachers are the most important factor in achievement, the NCTAF

recommendation, and the notion of a model of expert teaching (DeLeon, 2003; Sternberg

& Horvath, 1995; Vandevoort, Amrein-Beardsley, & Berliner, 2004). The NBPTS

focuses on identifying the attributes of excellent teaching and attempts to provide

grounding to guide and measure teacher quality (DeLeon, 2003; Kimball, 2001;

Vandervoort, Amrein-Beardsley, & Berliner, 2004). Wise, (1996) president of the

National Council for Accreditation of Teacher Education (NCATE), stated that the

NBPTS has developed a consensus definition of accomplished teaching and an accepted

measurement of accomplished teaching. This necessitates a more in-depth look at the

National Board, what it is, what comprises its goals and mission, and what it has accomplished since inception.

National Board for Professional Teaching Standards

The National Board for Professional Teaching Standards (NBPTS) is a nonprofit, nonpartisan, independently governed organization of teachers and others committed to teachers, working to strengthen the teaching profession and to improve student learning (NBPTS, 2000). NBPTS is governed by 63 directors, the majority of which are classroom teachers. The mission of the NBPTS is to establish high and rigorous standards for what accomplished teachers should know and be able to do; to develop and operate a national, voluntary system to assess and certify teachers who meet these standards, and to advance related education reforms for the purpose of improving student learning in American schools (NBPTS, 2000, p.1).

These goals are achieved through a process of National Board Certification which was developed by teachers and for teachers in order to recognize accomplished teachers who demonstrate in-depth content knowledge and teaching practices measured against high and rigorous standards. Kelley (1999) considered the keys to the mission statement the facts that the certification process is voluntary and that teachers are the leaders in defining and improving their own profession.

National Board Certification is a symbol of teaching excellence that complements, but does not replace, state licensing and is intended to be a path to professional growth and development (NBPTS, 2004c). Certificates are presently offered in 24 areas, including generalist and subject-specific certificates from early childhood through young adulthood. In order to apply for candidacy, the teacher must hold a baccalaureate degree,

have three years teaching experience, and have a valid state teaching license. Candidates

in all areas are required to take a content-knowledge written exam designed to probe the

depth of their subject-matter knowledge, submit a teaching portfolio that includes

extensive analysis of their classroom teaching and student learning, and video tapes and

work samples as evidence of accomplished teaching. The portfolio entries and

assessment center exercises are submitted to the National Board and scored by teachers

who have gone through extensive training and have demonstrated an understanding of the

NBPTS standards and scoring guidelines (NBPTS, 2000). Humphrey, Kappich, and

Hough (2005) called National Board Certification the centerpiece of the nationwide effort

to boost the profile of high-quality teaching.

Core Propositions of the NBPTS

Research on effective teaching has shown consistently that quality teachers make a

difference in student achievement (Darling-Hammond, 1997; DeLeon, 2003; Goldhaber,

2002; Mendro & Bembry, 2000; NCTAF, 1996; Sanders & Horn, 1998; Stronge, 1997;

Wenglinsky, 2000; Xin, Xu, & Tatsuoka, 2004). These findings on effective teaching

were used by the National Board for Professional Teaching Standards (NBPTS) to design

research-based core propositions for teaching. The five core propositions set clear

benchmarks for quality teaching and provide a focus for improving the practice of

teaching. They identify the values, beliefs, and assumptions underlying good teaching

(Berg, 2003).

Core proposition one states that teachers are committed to students and their learning

which includes knowing that all students can learn and recognizing the individual

differences in their students and adjusting instruction accordingly (NBPTS, 2000;

NBPTS, 2002). This also comprises knowing students' motivation, peer relationships, and self-concepts, and understanding each student's character and values.

Core proposition two asserts that teachers know the subjects they teach and how to teach those subjects to students (NBPTS, 2000). This simply means that accomplished teachers have mastery over all subject matter content they teach as well as an understanding of the real life applications of this knowledge. Certified teachers also need to have the skills and experience to teach this knowledge to their students using a variety of strategies.

The third proposition states that teachers are responsible for managing and monitoring student learning which includes delivering the instruction effectively for maximum learning (NBPTS, 2000). Expert teachers use multiple configurations and strategies in their classrooms, continually monitoring the students to ensure mastery. Teachers have students work in small and large groups, independently and with partners while keeping them actively involved in learning. Teachers adjust their techniques as needed, in response to ongoing informal assessment of student work, motivation, and accomplishments.

Proposition four emphasizes that teachers think systematically about their practice and learn from experience. An accomplished teacher models what it means to be an educated person – they read, question, and are curious and willing to try new things (NBPTS, 2000). They critically examine their practices, expand their skills and incorporate new research into their practice. The key to this proposition is being reflective and using knowledge to determine how to adapt and restructure their lessons to increase student learning and achievement.

The fifth and final proposition addresses teachers as members of a learning community. Certified teachers are expected to collaborate with peers to improve learning as well as act as teacher leaders in their schools and districts (NBPTS, 2000). Teachers openly communicate with parents, community, and peers to share their knowledge as well as learn from others.

These core propositions create an overall structure to the National Board process and are considered the foundation of excellence. The teacher developed standards in each certificate area are centered on these propositions which have direct applicability on classroom practices (Benz, 2000; NBPTS, 2000). Shakowski (1999) described National Certification as a credential attesting the teacher has been assessed by peers as one who is accomplished, makes sound professional judgments, and acts in accordance with those judgments. He maintained that the standards of the NBPTS are evident in all areas of their teaching and learning, including high expectations, knowledge of the standards, curriculum, and goals, and the ability to modify instruction to meet the various abilities and needs of students in the classroom.

NBPTS Standards and Practices

Although no list of specific practices exists for National Board Certification, there are research-based practices embedded in the standards for each certification level (NBPTS, 2000). These are similar at all levels, but only the early childhood generalist is reviewed here. These practices are described in the standards as those that an accomplished teacher should know and model in the classroom and are evidenced by NBPTS candidates in their portfolio entries (NBPTS, 2001).

Standard one: "Understanding Young Children". It is evidenced through a teacher's response to the unique needs and potential of each child, knowledge of each student, use of guided discovery, practicing skills just beyond the level of mastery, providing a variety of activities, and opportunities for social interaction and creative expression.

Standard two: "Equity, Fairness, and Diversity". It is demonstrated by having high expectations for all children and challenging each one to advance. Other evidence includes equitable participation, treating each other with respect and dignity, and promoting cohesiveness in the classroom as well as providing opportunities to practice teamwork and cooperation.

Standard three: "Assessment". This involves using a variety of assessment measures and methods in documentation and analysis of behavior and activities in addition to work. It also includes involving parents in the assessment process.

Standard four: "Promoting Child Development and Learning". This standard is evidenced by creating challenging, meaningful, and engaging learning experiences, choosing appropriate tasks, and providing opportunities for choices all using the appropriate materials and resources. It is also corroborated with opportunities to enrich understanding, problem-solving, and communication while integrating learning with the development of social knowledge about teamwork.

Standard five: "Knowledge of Integrated Curriculum".   Teachers demonstrate this standard by providing opportunities for students to select topics of interest and set up learning experiences based upon these topics. This standard is also evidenced by an understanding of the importance of exploration, inquiry, social interaction, and investigation. It also includes the opportunity to create and discuss codes of conduct and

to envision future roles as citizens. The key evidence in this standard is designing

integrated instruction that provides opportunities for students to use a variety of forms of

expression including drama and the arts.

Standard six: "Multiple Teaching Strategies for Meaningful Learning". This

standard is substantiated through providing meaningful, engaging learning experiences

through social cooperation and developing social skills. Teachers also provide

verification of standard six by using flexible grouping strategies and the promotion of

thinking, problem-solving, and concept development with opportunities for students to

reflect upon their answers.

Standards seven, eight, and nine: "Family and Community Partnerships",

"Professional Partnerships", and "Teachers' Reflective Practice". These are

demonstrated by a communication network that includes students' families and the

community, involvement in professional activities, and regularly evaluating, analyzing,

and synthesizing the quality and effectiveness of their work.

These standards are the basis of the portfolios submitted for certification. Although

not every level is the same, each level contains similar standards (NBPTS, 2000).

National Board Certified Teachers are expected to model the practices embedded within

these standards in their submissions. The submissions include video clips of their

teaching accompanied by written commentaries that demonstrate reflection, analysis, and

evaluation of the lessons.

Support for NBPTS

Shakowski (1999) is not alone in his support for the certification process offered by NBPTS. Through this process teachers are forced to defend and justify their teaching methods and reflect on instructional practices to improve student learning. In doing this teachers often need to change their practices especially to encourage higher level thinking skills and student-centered approaches and may be called upon to make changes in their fundamental beliefs (Crawford, Hjelm, & Mohor, 2003; Kimball, 2001). Cascio (1995) found NBPTS to be teacher driven and responsive to the profession while it aimed to identify outstanding practice. He contended that the success of NBPTS hinges on the belief that teachers are valuable resources who can lead one another, learn from one another, and assess one another. Several teachers, both successful and unsuccessful at certification, have characterized National Board candidacy as a positive professional experience.

Jenkins (2000) called the process the most powerful professional development activity she has ever done, affecting how she teaches and views teaching more than graduate courses, workshops, or conferences. Even after she attained certification, Jenkins has continued to analyze and reflect upon her work and continues to evaluate her performance. She attributes the fact that she and her students are more focused on learning to the certification process.

Childers-Burpo (2001) concluded the NBPTS certification process created an opportunity to communicate and reflect on experiences as a teacher. She felt she was a good teacher, but not an accomplished teacher before she began. Now that she is a reflective practitioner, Childers-Burpo considers herself accomplished, but obligated to

continue to improve since her certification was only the threshold of new beginnings for her as a teacher.

Roden (1999) was a middle school computer science teacher who was unsuccessful in his pursuit of the certification. Even so, he considered the process the "most intensive formal and professional project that I have undertaken in my 34-year teaching career…" (p. 416). He learned two significant lessons from the experience, to make time for reflection and the importance of collaboration with colleagues. Since completing the assessment, he continues to allow time for teacher collaboration in the many workshops he conducts on computer technologies.

Mitchell (1998) referred to a teacher in New Mexico who testifies that the board certification process has made her question her teaching, to ask herself why she is teaching a specific concept in a particular way. She no longer allows the status quo in her practices. NBPTS can spark a renewed interest in the profession and teachers attest to the positive impact it has had as they examine their practices in light of the standards (Feldman, 2004). While Loschert (2003) maintained the process helps teachers to learn more about themselves and their students, it helps them focus on each student as an individual, and it helps them to focus on what has been accomplished and what needs to be done, he also calls the portfolio piece of the assessment grueling. Barbara Winkfield, a National Board Certified Teacher (NBCT) from Michigan stated, "I examined and reexamined every aspect of my teaching practice. Best practices equates with better student learning" (Buday & Kelly, 1996, p. 217).

Berg (2003) maintained that NBCTs are better for students, are well-trained, able to change the culture of mediocrity, and their research-based practices increase the quality

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of learning experiences for children. This is because the NBPTS program challenges teachers to understand the conceptions of teaching and learning and to think more creatively to produce more effective and equitable learning opportunities for children. But not everyone is entirely satisfied with the national certification process. Hamsa (1998) agreed that NBPTS recognizes best teaching, but warned that it cannot be allowed to become an elite country club of the teaching profession.

Opposition and Concern about NBPTS

There is a growing consensus that researchers and policymakers need to prove the value of the certification process because although studies may show that NBPTS teachers are effective they do not show they are more effective than they would have been without the certification process (Archer, 2002). Criticism of the NBPTS is voiced by some because of the sole emphasis on what teachers know and should be able to do. These critics insist that it is more important to emphasize what they are able to accomplish in terms of achievement (Schalock, Schalock, & Myton, 1998). Podgursky (2001d) was critical of the entire process arguing that at best, the National Board certification tells the public that the teacher knows how to be a good teacher, but not that they put the theory into practice. He is especially critical of the lack of input from supervisors, principals, and the lack of a role for state standards. Podgursky and others disparaged the assessment process for its lack of attention to grammar or syntax errors in the written work and finds this particularly irritating for those working toward certification as English teachers (Finn & Wilcox, 1999; Podgursky, 2001b).

Burroughs (2001) continued the concern about writing but for another reason. He has worked with over 100 candidates at all grade levels over a five year period and he

believed strongly in the connection between writing ability and certification success. The portfolio demands descriptive writing, analytic writing and reflective writing and Burroughs considered them to be as much an evaluation of the teacher's writing ability as his or her teaching. By questioning those candidates he worked with, Burroughs found that candidates felt the writing was intimidating. Candidates had difficulty with writing apprehension, representing their knowledge in terms of the standards, and using the evidence to support what they do in the classroom. Burroughs considered rhetoric to be an unarticulated standard for national certification.

Other critics call the NBPTS a union-dominated outfit causing new woes for the schools, and a contest in which teachers compete for professional recognition (Finn & Wilcox, 1999; Zemelman, Daniels, & Hyde, 1998). Finn and Wilcox went on to criticize the progressive ideology that the NBPTS espouses maintaining that fundamental, basic knowledge is forgotten in the race to try new ideas. Holland (2002) was outspoken in his opposition to what he termed the power base of NBPTS, the teacher unions. The unions have jointly published a guidebook to seeking the certification and Holland was critical of its advice. Specifically, he criticized the repeated admonition to candidates to pay attention only to the NBPTS standards, not those teachers may have been successfully using in their teaching practices. Failure to provide equal access to minorities, divisiveness in faculties, and a drain on precious professional development funds are additional complaints cited by some critics (Zemelman, Daniels, & Hyde, 1998).

Bullough, Burbank, Gess-Newsome, Kauchek, and Kennedy (1998) stated that National Board Certification is presented as a solution to all kinds of problems with teachers and teacher education, and then went on to declare it a competitive,

individualistic contest with winners and losers. The claim of NBPTS is that the process is for professional development not evaluation and Bullough et al. believed that if this is so, then there are less expensive ways of providing similar professional development. A final criticism deals with the finality of the process. Once teachers go through it they are declared accomplished teachers for 10 years. The authors argue that expertise is not a state of being but of becoming and that professional development must be ongoing; teachers must continually strive to improve and the National Board Certification (NBC) process only allows for this every 10 years.

Opposition to the portfolio design is voiced due to too much attention given to display and not enough to content. The fear is that the portfolio design might be skewed toward a vision of what teaching might be, not what teaching is (Iovacchini, 1998). McNeil (1987) disagreed with the scope of teaching that is addressed in the assessment and contended there is no predictive validity to it since it offers no guarantee how a successful candidate would teach in the real classroom over time. McNeil also disagreed with NBPTS's perspective of the certification as the defining view of teaching when it should be an alternative for analysis and evaluation.

Thirunarayanan (2004) offered evidence that National Board Certification is far from the vision of the highest level of expertise. He maintained that teachers only need as much subject matter as their students and that the content area knowledge is based on high school level courses. In discussing each of the core propositions, Thirunarayanan maintained that all teachers would have commitment to their students, know their subject-matter, manage and monitor student learning, think and learn from experiences, and be members of learning communities. He accused the document of vagueness and

high level language to mask the mediocrity of the certification. Thirunarayanan went on

to describe the requirements of a respectable NBCT: possessing a doctorate in the area of

expertise, five years experience showing higher student achievement than other classes,

having developed and tested innovative teaching and/or learning activities, writing

scholarly works, and performing well on rigorous exams. While Thirunarayanan stated

he has evidence to support his claims, Margolis (2004) found none in his writing and

described his evidence as simple opinion. Margolis argued that the pursuit of National

Board certification is a scholarly, intellectual investigation and that Thirunarayanan

wants academic requirements for teachers similar to the criteria for a tenure track position

in higher education. In closing his argument against Thirunarayanan, Margolis pointed

out that it is a rare dissertation or journal article that can make an impact on learning like

a National Board Certified Teacher.

Finn and Wilcox (2000) maintained that teacher quality should be determined by

student achievement and that the portfolio piece of the NBPTS assessment demonstrates

little about their impact on student learning. The videos are too short to give a true

picture of the teacher's work and the explanations of how these prove the implementation

of the standards that accompany the videos are of minimal use in evaluating teaching

skills. Finn and Wilcox argued that a peer review should not be the benchmark for

quality, but what is needed to justify the process is hard evidence of improved student

achievement.

Detractors of the NBPTS process charge there is a lack of research linking National

Board Certified Teachers (NBCTs) with increased achievement and argue that this is

compounded by states and local districts offering financial incentives to NBCTs

regardless of budget cuts (Richard, 2004). However, Betty Castor (2001), former

president of NBPTS, maintained that the states must continue to give financial support to

aide in the development and retention of a stable supply of NBCTs in their schools.

Financial Issues Concerning National Board Certification

Despite the controversial issue of incentives and certification, 44 states offer some

type of incentive to candidates and NBCTs (NBPTS, 2004d). The types of incentives

range from full or partial payment of fees (30 states), to pay supplements (30 states), and

include less tangible incentives such as license portability (33 states), which allows

teachers to move between states without completing additional certification requirements

(Kelley, 1999; NBPTS, 2004d). Only six states offer just license renewal as an incentive

to complete the process. The NBPTS website (2004d) reports that candidates from all

states are eligible for federal funds under the Candidate Subsidy Program. West Virginia

is one of the states to offer a yearly stipend to teachers for the length of their certification,

10 years. In addition to a $2500 per year stipend, West Virginia pays one-half the

certification fee upon enrollment and the other half upon completion for two hundred

candidates per year with yearly legislative approval, under Policy 5202. West Virginia

also pays $600 per candidate for expenses incurred or will pay $600 toward retake

expenses in lieu of expenses.

While NBPTS' purpose is unrelated to salary, teachers often report that financial

incentives are part of the reason they apply (Castor, 2001). Considering the $2300 fee, to

be increased to $2500 in January 2006 (New Hanover County Schools, 2005), and a

minimum of a year's work to pursue the certification, many feel it is vital in order to keep

these excellent teachers in the classroom (Castor, 2002). Zemelman (1998) argued that

the salary increases cause divisiveness among faculty members and funnel scarce professional development funds into an elite group of teachers when they could be used to benefit all staff members.

A study done to determine the impact of Mississippi's legislative policies concerning National Board Certification find a dramatic jump in the number of teachers applying for the certification after a supplement of $6000 was approved (Swoger, 2002). The study included surveys of 361 NBCTs and interviews of NBCTs, principals and superintendents in 10 districts. Findings showed a consensus that legislative support succeeded in attracting teachers to the process, but that teachers did not feel their expertise was being fully utilized. The incentives produced more NBCTs but no direction for best use of their skills.

Kelley and Kimball (2001) explored the use of financial incentives focusing on why teachers pursue the certification. Further, they examined the impact of linking pay to certification. Through a qualitative study using a purposeful sample of five districts in five states, the researchers collected data by means of interviews and examination of documents. Findings showed teachers were influenced to apply by three factors: pay incentive and fee support, affirmation and recognition of excellence, and professional growth and advancement. The financial inducement did not lessen the pressure of the certification process, but teachers felt the incentives made it worthwhile.

Over the past 10 years, it is estimated that NBPTS has spent more than $165 million in private and public funds to formulate the assessment process and publicize its benefits (Education Consumers Consultants Network [ECCN], 2002a). Policymakers are being urged to continue their support of teachers pursuing the certification despite the fact that

NBPTS' claims of academic achievement and teacher quality have come into question (ECCN, 2002a). In a May 2002 briefing, Eric Hanushek, a senior fellow at the Hoover Institution, commented on a feature of American education stating that frequently widely acclaimed and often expensive policies escape true evaluation. He was referring to studies done by NBPTS to demonstrate its effectiveness, but that no definitive studies had been done at that time to prove that student achievement had improved (ECCN, 2002b). The following section will report on a variety of studies that have been completed concerning NBCTs, those sanctioned by NBPTS and those done independently.

Research on National Board Certification

 Indiana Standards Board Study (2002). The Indiana Professional Standards Board (2002) conducted a study to determine the characteristics of National Board Certification (NBC) applicants, to ascertain how they were informed of the process, to establish the difficulty of the process and the support that was provided, and to determine the kinds of support needed for future applicants in Indiana. At the time of the study there were fewer applicants in Indiana than any other state and this was a matter of concern. A survey was electronically sent to all Indiana NBCTs located online (93%) and 48% responded.

Results showed that 62.5% had 5 to 15 years experience before certifying, 87.5% attended various workshops and conferences over the years, 31% completed master's degrees, and 37.5% took courses. Multiple characteristics were mentioned including the desire to enhance personal effectiveness, to improve student learning, the challenge, being a lifelong learner, having high standards, and affirmation. The study listed 18 different ways the teachers had learned about the certification process and found that the majority had no problem with the application process. Support during their certification

ranged from no support to encouragement, assistance, release time, financial help, and videotaping. Fifty-three percent reported the process helped them become more reflective. Time was reported as the greatest struggle in the process. Researchers felt that this study offered a better understanding of the process to educators, legislators, and the general public and hoped more teachers would pursue the certification.

Goldhaber, Perry, and Anthony Study (2003). A study by Goldhaber, Perry, and Anthony (2003) was completed to assess the factors associated with the decision to apply to NBPTS and the factors associated with successful certification in North Carolina. The study began with the full NBPTS-eligible population of 251,567 teachers in North Carolina with at least three years teaching experience and no prior NBPTS certification. The sample included 4,246 teachers who actually applied from 1997 to 2000. Data used included school performance on student test measures, NBPTS assessment results, school and community characteristics, and district incentives. Variables included NBPTS outcomes, race, gender, scores on Praxis I and II, the National Teacher Exam, and Scholastic Aptitude Test or Graduate Record Exam, and financial incentives.

Results illustrated that with all else equal, teachers who are African American, and/or female, who score higher on tests, or are younger are more likely to apply. However, African American and male teachers are less likely to be certified.

Chittenden and Jones Study (1997). Chittenden and Jones (1997) conducted a study that attempted to identify the components of the certification experience that were critical to the teachers' professional knowledge. Eighteen teachers in South Brunswick, New Jersey completed the process; the 10 who certified in the Early Adolescence area were chosen for the study. Teachers were observed and interviewed over a three-year

period spanning their support group meetings to become familiar with the standards, the compilation of portfolios and an evaluation of the process after receiving the results.

Problems noted were related to what to write, not enough time, what the scorers want to see in the portfolio, and what was next since they were some of the first to complete the process. All teachers pointed out that the certificate had not made them accomplished teachers, it only recognized that fact. Each one did say that the process had influenced her professional work and made her more conscious of the reasons for instructional decisions. They agreed that there were no changes in their instructional practices, but a modification in how they understood and why they did what they did.

Sato Study (2000). Sato (2000) investigated the learning that takes place and the intellectual growth that is fostered by the process of certification. Seventeen teachers participated in the study; 12 had received national certification and five planned to resubmit their work. All had entered the process with little prior knowledge or understanding of the standards they were required to successfully demonstrate. The study used those standards as benchmarks as a pre- and post-test to compare the teachers' learning. Learning was reported in several domains: (a) disciplinary content knowledge, (b) teaching repertoire, (c) knowledge of students, (d) learning about oneself, and (e) thinking metacognitively. No two teachers reaped the same learning benefits from the experience, but all felt the process of engaging in analysis and reflection were important. Sato concluded that this study demonstrates the National Board Certification process' potential to contribute to teacher learning through professional development embedded in practice.

Bohen Study (2000). Bohen's study (2000) examined 13 teacher candidates'

perceptions during and after the certification process and how it influenced their teaching

practices. The study was based on four research questions: professional development

value, influence on classroom practice, influence on teachers' thinking about teaching,

and the support needed by teachers. Results of this case study revealed that these

teachers had greater professional confidence, had improved their analysis of instruction,

had a clearer focus on student outcomes, and had increased prestige. Bohen predicted

that there would be greater participation in the NBPTS certification process.

Clehouse Study (2000). A similar study was conducted by Clehouse (2000) to

assess the perceptions of NBCTs about the impact of the process on their attitudes,

knowledge, behavior, and students. The population for the study was all NBCTs with

email addresses available from NBPTS as of April 1999. An online survey was

completed by 330 teachers and an additional 36 completed a printed survey.

Descriptive analysis of the results indicated teachers believed they and their students

incorporated more reflective analysis and critical thinking into their learning. Teachers

also felt their increased self-confidence encouraged them to seek opportunities for

leadership roles and that their students' self-confidence levels increased and allowed

them to become more enthusiastic learners. No significant differences were found

between the different certification areas.

Two National Board for Professional Teaching Standards Studies. The National

Board for Professional Teaching Standards (2001a) conducted a study to assess the

impact of the certification process on teachers. A random sample of 600 teachers from a

pool of 4,804 certified between 1994 and 1999 and a random sample of 600 assessors

from a pool of 1,500 who served as assessors in 2000 were sent surveys. From the results of the returned surveys (42% return rate) the researchers deemed the certification process a success for both groups and that it had a strong effect on the teaching of both groups. It also led to positive interaction with parents, teachers, students, and administrators. The results supported the researchers' hypothesis that teachers are strengthened in their classroom practices through this process.

Later, the National Board for Professional Teaching Standards (2001b) carried out another study to gauge the extent to which candidates benefited from the certification process and the value of the experience. Researchers sent out 27 question surveys to 10,700 recently successful candidates and received 5,641 responses from 49 states. Six key findings resulted from the data: (a) 92% responded the process made them better teachers; (b) 96% rated the process as excellent, very good, or good; (c) 89% reported the process equipped them to create stronger curricula and improved their abilities to evaluate student learning; (d) 82% said it enhanced interaction with parents and students while 80% said it increased peer collaboration; (e) 68% reported a high level of awareness of the process in the schools; and (f) 86% had support from colleagues, 80% had support from principals, and 63% had support from district administrators.

Unrath Study (2002). In a similar study, Unrath (2002) sought to provide a broadly based description of the National Board Certification process and the perceived impact the portfolio piece had on the reflectivity of NBCTs and its corresponding effect since completion of the process. A survey was sent to 99 National Board Certified art teachers who certified between 1996 and 2001 and 70 were returned. The survey consisted of one main question and five sub questions to determine in what ways the act of reflection

through the portfolio process, affected, changed, or enhanced their teaching practices. The researcher asked the participants to consider their reflectivity prior to the certification process, to examine their portfolio entries to determine which had the greatest impact on their ability to be reflective, and to suggest how the process had changed or enhanced their reflectivity. The results of the study affirmed that the structured, critical portfolio was a powerful agent for encouragement of professional development and positive growth in a professional teaching career. The researcher felt that the study results demonstrated that reflective thinking is both the catalyst and the consequence of the certification process.

Place and Coskie Study (2004). In order to explore what teachers learned about literacy from engaging in the National Board candidacy program, Place and Coskie (2004) completed a qualitative analysis of teacher learning. The participants included eight teachers active in a Washington state initiative to encourage National Board Certification participation. All eight received scholarships to help defray the costs of certification and attended a support group. They represent a variety of schools, economic statuses, races, and experiences. At the beginning of the candidate year the eight participants were interviewed and asked to look at samples of student work to discuss their perceptions of the work, what further information was needed about the work, and their thoughts on appropriate instruction for the student. At the end of the year another interview was held to determine what they had learned about literacy and their students. Samples were given to them and the same questions were asked concerning the samples.

The reasons for pursuing the certification varied, but all mentioned the opportunity to learn, especially to learn which of their practices were most effective. The participants

saw the certification process as a model for how teachers should be working with children and how they should build a curriculum. They felt that the intense focus on students that is required by the process led them to heightened understanding of their students and to more differentiated instruction.

Place and Coskie (2004) formulated the following conclusions about the certification process. First, it provides an opportunity to reflect on practices within a structured protocol and provides an effective way to support teaching. Second, when teachers are placed outside their comfort zones and asked to reflect in writing they can gain important insights about their practices. Third, teachers who are willing to work hard and improve their efficacy will therefore improve their ability to meet their students' needs. Last, the act of writing helped make intuitive practices visible and allowed the exploration of variables in their teaching practices.

Research on National Board Certification and Student Achievement

Bond, Smith, and Baker Study (2000). One of the first major studies to investigate National Board certification and student achievement, this study's purpose was to determine whether or not there is a measurable difference between teachers certified by NBPTS and others who did not meet the standards. Specifically, researchers attempted to answer two questions: Do students with NBCTs produce higher quality work and are the classroom practices demonstrably different based on an independently developed observation protocol? Researchers identified 13 attributes of exemplary teaching in the literature: (a) use of knowledge, (b) deep representations, (c) problem-solving, (d) improvisation, (e) classroom climate, (f) multidimensional perception, (g) sensitivity to context, (h) monitoring learning and providing feedback, (i) test hypotheses, (j) respect

for students, (k) passion for teaching and learning, (l) challenge, and (m) deep understanding.

The sample included 65 teachers from North Carolina, Ohio, and Washington, DC who sought certification as Middle Childhood Generalists or Early Adolescence/English Language Arts teachers. Assessment scores had to fit into one of four categories: (a) at least one and one-fourth standard deviations below passing, (b) between one-fourth and three-fourths of a standard deviation below passing, (c) between one-fourth and three-fourths of a standard deviation above passing, and (d) at least one and one-fourth standard deviation above passing. Participants included both whites and African Americans and were divided according to their success in attaining certification.

Data collection involved a teacher questionnaire describing a lesson to be observed and teaching philosophy, classroom observations by trained observers, interviews of teachers and students, and student writing samples. Teachers also submitted a log of all assignments made during the instructional unit observed and all work submitted by four students in response to those assignments. During the observations, one observer completed the observation protocol which coded the amount and nature of feedback, management strategies, and off-task behaviors. A second observer coded a narrative report describing classroom activity and teacher-student interactions. All information was compiled into a casebook for scoring. Each attribute was scored using a rubric that was then compared to evidence in the casebook and teachers were rated accordingly. Two assessors reviewed each attribute and casebook.

The results showed that although all teachers did well, the NBCT group outscored the others in all measures with dramatic differences on 11, supporting NBPTS's

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contention that it does identify expert teachers. Differences in multi-dimensional

perception and monitoring learning were too small to be significant. The student work

was divided into two groups, surface understanding and deep understanding. Seventy-

four percent of NBCT's students fell into the deep understanding group while only 29%

of the non-certified teachers' students were in this category.

Not everyone was excited about these results as is evident in criticism by Podgursky

(2001a) who raised several questions about the methodology of the study as well as

possible bias due to failure to control for any factors other than National Board

Certification. Podgursky maintained that there is no way to know whether the 13

dimensions used in the observation protocol actually correlate with improved student

achievement and that the dimensions are vague. Also, the demographics of the

classrooms is unknown and based on information given in the report it appeared that the

NBCTs were twice as likely to have children from wealthy families. The final concern

deals with the sampling method. Bond (2001) agreed with Podgursky's argument that

high scoring and low scoring teachers were over sampled. Bond and his associates stated

that this was done to ensure dependable differences between the groups. Podgursky

maintained this simply biased the results.

In response to these assertions, Bond (2001) pointed out that 30 pages were devoted

to explaining the 13 dimensions or attributes and they were identified apart from any

research from the NBPTS. Bond defended the quality of the data received despite the

lack of control or information on socioeconomic status stating the quality of training

given and the quality of the observation protocol would deal with that. He also defended

the sampling technique asserting that a random sampling would not have resulted in a materially different outcome.

In a final rejoinder to Bond, Podgursky (2001b) argued that it is not highly unlikely that a random sampling would have produced different results since Bond's procedures exaggerated the quality differences in the two groups of teachers. Podgursky continued to insist that a rigorous study would have paired the observations of teachers with students of similar backgrounds and controlled for the effects of other variables. He concluded that Bond's study fell short of the standard of a well-designed study that compares achievement while controlling for prior achievement and socioeconomic status.

Stone Study (2002). Stone investigated whether National Board for Professional Teaching Standards –certified teachers in Tennessee were exceptionally effective in producing student achievement gains. The study concentrated on 16 teachers with National Board Certification teaching in grades three through eight since these were the only Tennessee NBCTs with value-added teacher reports in the state database. These value-added reports were necessary in order to use Dr. William Sanders' model of value-added to compare gains and determine teacher-effect.

Stone (2002) defined exceptional as teaching that brought about an improvement in student achievement equal to 115% of one year's academic growth. He chose this since Chattanooga had recently begun giving teachers a $5000 bonus if their students gained 115% of the local average in three core subject areas (reading, mathematics, and language). The percentage of annual growth was the critical indicator of teacher effectiveness. It is the ratio of the teacher-effect score to the average annual achievement growth for the school system multiplied by 100.

Results showed that not one of the 16 teachers would qualify for the bonus when data were taken individually. All fell short of the standard by either one of the required subjects or for two out of three years (when three years of data were available). Collectively there were 123 scores to consider and only 18 of these scores would reach the exemplary rating while 13 would be designated as deficient.

In anticipation of the question about representative scores, Stone (2002) acknowledged that it is statistically possible that while none of these teachers appear to be exceptional, the others without teacher-effect scores available might be so classified. However, he maintained this is not very plausible unless this group is an anomaly. Stone considered these findings to be a challenge to NBPTS's claim regarding teacher quality, standards, and certification. He admitted the findings are not definitive, but insisted that they indicate a problem with the certification process.

Once again, however, there is disagreement over the findings, most vocally by the NBPTS. Minichello (2002) as contact for the NBPTS wrote that the sampling was miniscule and that there were not enough data to make the statements and judgments that Stone did. A review of the study was scheduled by the Education Commission of the States to assess the study and Stone's conclusions.

The review was completed by Susan Fuhrman, a University of Pennsylvania researcher, Dominic Brewer, director of education at the RAND Corporation, Robert Linn, professor of education at the University of Colorado, and Ana Maria Villegas, professor of curriculum and teaching at Montclair State University (Education Commission of the States, 2002). They concluded that Stone's findings were not necessarily wrong, but rather that his methods that led to them were flawed. Their first

major argument was that no descriptive information was available concerning the 16 teachers other than their grade level and certification. The reviewers would have liked to have the following information: demographics, educational background, experience, year and type of Board certification, demographic and educational information on the students, how they compare in these first items to all of the Tennessee Board Certified teachers, and how they compare in these areas with all Tennessee teachers. This information is invaluable when looking for patterns and the exploration of other possibilities.

Another piece of information missing is the extent to which this assessment aligns with Tennessee's standards to determine if it is a valid measure of student achievement. The Education Commission of the States' (2002) final concern is the sample size since although 16 teachers were studied only six of them had data for three years. They are critical of Stone for making a judgment about a national system based upon six teachers. The reviewers were unanimous in asserting that Stone's statement that his findings present a serious challenge to NBPTS was not supported by the study.

Stephens Study (2003). Stephens conducted a study in two of the larger school districts in South Carolina looking at standardized achievement data in mathematics from the Palmetto Achievement Challenge Test. The sample included all fourth and fifth graders in the two school districts. Stephens created pairs of students by matching their demographic data and dividing them according to whether or not their teacher was a NBCT. The purpose of the study was to determine whether the National Board process of recognizing quality teaching was supported.

Results of the study showed no significant difference in the scores of the students except in the case of one matched pair. Stephens (2003) concluded that there was no clear evidence that the NBCTs in these schools increased student achievement.

Vandervoort, Amrein-Beardsley, and Berliner Study (2004). The purpose of this study was to examine the relationship between National Board Certification and student achievement as measured by student performance on the Stanford Achievement Test (SAT-9). Researchers studied data from 14 districts in Arizona using 1999 – 2003 data for grades two through six. They did a comparison of the adjusted gain scores of NBCTs and non-certified teachers and an online survey that provided demographic information and teacher opinions of the NBPTS assessment process. Thirty-seven teachers and 24 principals completed the survey and achievement data for 208,650 students were compared.

Survey results indicated that teachers felt there were better ways to measure teacher quality than the SAT-9 results and gave examples such as direct observation, student growth over time and using a variety of assessments instead of just one. Principals rated the NBCTs in their schools as some of the best teachers 85.3% of the time and described the qualities of these teachers as collaborative, organized, dedicated, professional, ethical, motivating, challenging, focused, communicative, and leaders in curriculum and instruction. Principals cited an ability to use a variety of teaching strategies, meet student needs, effective use of time, a willingness to try new things, and making data-driven decisions.

Specific achievement findings indicated students of NBCTs made greater gains in 75% of the comparisons in 1999/2000. The gains were significant in 33% of them and in

two instances the non-certified teachers' students outperformed the NBCTs', but it was not a statistically significant finding. The gains for the 2000/2001 school year were similar with three cases of non-certified teachers' students outperforming NBCTs' students. In 2001/2002 the gains decreased to 58.3% with no significant differences while in 2002/2003 the gains jumped to 83.3% with significant differences in 50% of the comparisons.

In analyzing the effect size, researchers found it was just over +0.12 concluding the effects of having a National Board Certified Teacher is not trivial and can give as much as a one month advantage in achievement. Vandervoort, Amrein-Beardsley, and Berliner (2004)concluded that the elementary level NBCTs in Arizona were superior teachers, judged to be leaders by their superiors, and raised student achievement more over the course of a year than non-certified teachers. These findings are similar to Goldhaber and Anthony's (2004) giving more credence to NBPTS's claims of identifying effective teachers.

Cavalluzzo Study (2004). This NBPTS sponsored study used data from the large urban school district in Miami-Dade County Florida to examine the association between student gains in mathematics in grades nine and 10, National Board Certification, and other indicators of teacher quality. Cavalluzzo accessed 108,000 student records from 1999 through 2003 and used scale scores to measure individual student growth over time. Data included personal demographics on teachers and students and achievement scores. By controlling for several variables, Cavalluzzo could isolate the effects of having a NBCT. Teacher characteristics/demographics included certification, experience, degree level, teaching assignment, selectivity of undergraduate school and National Board

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Certification status, pending, obtained, failed, withdrew, never pursued. Student factors included repeating grades, gifted designation, school suspensions, number of absences, GPA in core subjects, average teacher scores in math, age, grade level, and English as Second Language classes. Information on the schools included enrollment, number of crimes/violent incidents, percentage of students absent 21 or more days, student mobility, and per pupil expenditures.

Using all of these data, the researcher concluded that all characteristics except the quality of the undergraduate school attended made a significant contribution to student outcomes. Having National Board Certification and high school math certification had the greatest effects on achievement. All else being equal, math teachers with National Board Certification helped their students achieve larger testing gains than did colleagues without the certification. The study also found that NBCTs are particularly effective with students who have special needs, and provides some evidence of extra benefits to Blacks and Hispanics. Cavalluzzo (2004) contends that since teacher effectiveness is the goal for all teachers, it would be worthwhile to encourage all teachers to do what NBCTs do in their classrooms.

Goldhaber and Anthony Study (2004). The researchers call this study the first large scale study to assess the relationship between the certification of teachers by the NBPTS and elementary student achievement. The study used achievement data for third, fourth, and fifth graders in North Carolina. Goldhaber and Anthony felt North Carolina would be the ideal state due to its large number of NBCTs. They chose only third, fourth, and fifth graders because they are more likely to have only one teacher allowing for linkage

of student records and teachers. The primary data source was North Carolina's Department of Public Instruction for school years 1996/97 through 1998/99.

Beginning with 889,655 student observations in the database, researchers were able to match 609,160 student observations with 32,399 teacher observations that included valid scores for reading, and 611,517 student observations with 32,448 teacher observations with the same information for math. Roughly 9,000 students in the sample had a NBPTS candidate going through the assessment. Approximately 6,000 in the sample had a NBCT. Researchers were able to compare NBCTs both prior to receiving their certification and after they had been identified by NBPTS as having mastered the standards.

Results indicated that student gains produced by future NBCTs exceed those of non-certified applicants by 4% of a standard deviation in reading and 5% in math. The effect sizes for current NBCTs are smaller but still positive. Researchers were surprised with finding that future NBCTs appear to be far more effective prior to receiving their certification than after they receive it. One explanation Goldhaber and Anthony (2004) posited for this finding is that the process is so intensive that teachers are less effective in the year they achieve certification. One implication of this is that the certification process does have a short-term negative impact on teacher effectiveness. Another important finding in the study was that the impact of new NBCTs and future NBCTs varies by student sub-group and/or grade level, and is especially evident, to a larger degree, with poor students.

The findings indicate that there is a positive return on the investment in National Board certification. This study confirmed the success of the NBPTS assessment in

identifying more effective teachers. However, while the researchers consistently found Future NBCTs to be more effective, there were mixed results about their effectiveness after being identified as an NBCT. The research did not show that the process itself makes teachers better.

Research on National Board Certified Teacher Practices

   Pool, Ellett, Schiavone, and Carey-Lewis Study (2001). The purpose of this study was to examine variations among the professional practices of a small sample of teachers recently certified by the National Board. Specifically, researchers looked for differences in teaching and learning contexts and their implications for validity of NBPTS assessments and the extent to which these teachers were used as a resource by their schools or districts.

   Six teachers were chosen for this qualitative study representing a variety of subject areas, school level (two each from elementary, middle, and high school), school size, ethnicity, and SES student populations. Researchers interviewed the principals, assistant principals, and colleagues at each site. Two researchers observed each teacher during a planned lesson. Researchers used the Professional Assessment and Comprehensive Evaluation System (PACES) to describe teaching practices and quality. This is a comprehensive, learner-centered system designed to provide information for improving learning and teaching. Data from the various sources were verified and synthesized.

   Results of the study showed that considerable variability exists in effective teaching practices and the quality of teaching across all grade levels. Many of the practices observed ranged from novice to expert. Problem areas for teachers characterized by PACES as ineffective included classroom management, clarity in explanations,

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structuring content, and lack of higher order thinking. Two teachers were judged as exemplary while two others were judged as average according to the PACES criteria. Although not a comparison with non-certified teachers, the results do demonstrate the wide variability in classroom practices of NBCTs.

While the sample size is small, the results are clear enough to warrant further study of NBPTS teachers' practices. The researchers recommended that further studies be done incorporating multiple observations over multiple occasions. Pool, Ellett, Schiavone, and Carey-Lewis (2001) asserted that there were no assurances that these credentials would ensure quality teachers or quality teaching in everyday practice.

Tracz, Daughtry, Henderson-Sparks, Newman, and Sienty Study (2005). This study consisted of 25 interviews with teachers to determine how the National Board Certification process impacted their teaching. Twenty-two teachers were certified, one was banking points in order to complete the retake process the next year, and two were non-certified and had no plans to try again. The interview themes that were perceived to have the greatest effects centered on: reflection, assessment, and professionalization of the field of teaching. The participants came from California, Ohio, and Texas and were predominantly white with an average of 18 years experience, and with a variety of certification areas.

Participants were asked six questions. First, how did the process help you create a positive learning environment? Sixty percent of participants said they had not created a more positive environment since they already had one established while the other 40% said they were striving toward a more positive environment. Second, how did the process help you plan and design instruction? Of the 25 comments reported 12 concerned

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positive changes in planning and included focusing on standards, staying with the curriculum, more aware of varying styles and abilities, and setting goals. Third, how did the process help you deliver instruction to all students? Sixty-four percent said they were more reflective about delivery, 40% were more aware of individual students, while other answers included learning styles, multiple intelligences, varying teaching to meet student needs, and accommodations in teaching due to increased awareness of differences. Fourth, how did it help you demonstrate your subject-matter knowledge? While the majority answered it had helped them, several were not sure that it had or said that it had been no help at all. The most frequent comment concerned the motivation to learn that accompanied getting ready for the assessment. Fifth, how did it help you to diagnose and evaluate student learning? Seventy-six percent cited the benefits of the process in the increased degree of focus on evaluation and the increased quality of the evaluations. Most mentioned that they were using the results to diagnose further needs now. Sixth, how did it help you participate as a member of a learning community? The majority found the process helpful and stated that they had increased communication with colleagues and were expanding their boundaries.

The most prominent findings from this study were that these teachers spent more time reflecting on their practices, focusing on the students and standards, and found that assessment was increasingly shaping their planning for instruction. They all felt a renewed commitment to meeting the needs of their individual students. At least 60% of the teachers surveyed noted a change in their classroom practices. These changes included attention to learning styles as related to student needs, varying instructional strategies, and focusing on standards. In other words, these teachers became more

student-centered in their approach to instruction while keeping within the required curriculum.

In conclusion, studies surrounding the effectiveness of National Board Certification do not show a consensus of opinion and often cause controversy. However, with an increasing amount of literature linking student achievement and learning to teachers and their practices, studies will continue to try to find an answer (Bohen, 2000; Cavalluzzo, 2004; Goldhaber & Anthony, 2004; Sato, 2000).

Associated with the discussion on the effectiveness of National Board Certification and teacher quality is the question of what teachers do in their classroom. When the NBPTS took on the challenge of defining quality teaching it did not make judgments about best practices or weigh in on pedagogical debates (Berg, 2003). Darling-Hammond (1999) asserted that one consistent finding in her research is that there is a positive relationship between teachers and achievement when teachers use a variety of strategies and interaction styles rather than a single approach. Or as Brophy and Good (1986) maintained:

> If there is a magic bullet to be found in improving instructional effectiveness in American schools, it probably lies in finding situations in which many instructionally desirable conditions coexist in classrooms and in situations where students experience such powerful combinations of instructional practices across their careers in school (p.1552).

National Board Certification is an open-ended process allowing teachers in all environments with differing teaching styles to become certified. Regardless of what subject or grade level is taught, the bottom line is that teachers with the national

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certification must meet the NBPTS standards in their practice (D.F. Lussier, research

contact for NBPTS, personal communication, May 31, 2005). The National Board for

Professional Teaching Standards recognizes best teaching practices and expects certified

teachers to model best practices, but does not define the actual practices for them to use

(Hamsa, 1998). Hamsa also asserted that in order to prepare students for the future,

teachers must transcend the traditional strategies of the past and begin to focus on

research based practices.

Best Classroom Practices

There are widespread erroneous beliefs about what is considered good teaching.

Some insist upon content knowledge while others think it is only necessary to care about

children and know how to teach. In reality it requires these plus other skills including

evaluating student progress and needs, translating materials into language children can

comprehend, exercising sound professional judgment and acting upon that, all the while

following the rules and regulations of the different bureaucratic levels (NBPTS, n.d.).

The National Board for Professional Teaching Standards (NBPTS) presents a description

of accomplished teaching and recognizes outstanding teaching to prove the value of good

teachers to the schools (NBPTS, n.d.). In defining critical aspects of practice that

exemplify teaching, the NBPTS set the standards for what teachers should know and do,

but did not spell out the specific instructional strategies or classroom practices that

teachers would be expected to use. It relied on the values, beliefs, and assumptions that

underlie good teaching (Berg, 2003).

The complex challenge of enhancing learning for all children is not merely a matter

of preparing teachers "to do the usual things better" (Goodlad, 1994, p. 196). The old

environment consisted of memorization of facts and reporting back to the teacher. The new environment in education requires the use of one's mind to meet a rapidly changing society (Mitchell, 1998). Attention must be focused on the critical value of instruction and ways to improve instruction through professional development in collaborative learning, active engagement, networking with peers, and reflection on practices (Alliance for Excellent Education, 2004).

The skills needed in today's world cannot be attained through practices that produce passive, rote learning and promote little intellectual power (Darling-Hammond, 1997; Stronge, 1997; Toch & Daniel, 1996). Teachers are not service delivery professionals and rather than performing for the students, should challenge the students to perform (Sparks, 1998). Research reviewed by the National Commission on Teaching and America's Future (1996) demonstrated that students learn best when new ideas are connected with previous knowledge and experience, when they are actively engaged in using that knowledge, when learning is organized around clear goals with practice reaching them, and when they can use their interests and ideas as springboards for new learning.

There are certain liabilities that accompany the quest for best practices and in identifying these practices one must be careful not to insist upon a singular path that does not call upon the teacher's wisdom in recognizing and articulating what is best for the students (Davis, 1997). Patton (2001) cautioned that best classroom practices that are highly prescriptive and specific are a poor way to proceed while best practices that are principles to guide classroom practice are helpful. Although opinions vary on these best classroom practices, there are some apparent similarities.

Studies have shown that there should be an emphasis on the production of knowledge, not its reproduction, including in-depth thinking, problem-solving, questioning, metacognition, and reflective discussion (Berends, 2004; Brophy & Good, 1986; Fullan & Rolheiser, 2002; National Council for Social Studies [NCSS], n.d.c; Stronge & Hindman, 2003). These studies and others also prove that learning should be student-centered which incorporates one-on-one interactions, multiple intelligences, differentiation, dialogue, play, student curiosity as a source of curriculum, and activities linked to interests (Berends, 2004; Dewey, 1997; Fullan & Rolheiser, 2002; NCSS, n.d.c; Stronge & Hindman, 2003; Toch & Daniel, 1996). Other findings incorporate large and small group instruction, active learning opportunities, integrated subjects, cooperative learning, direct instruction, and mastery learning (Berends, 2004; Dewey, 1997; Fullan & Rolheiser, 2002; Lapham, Gatto, Jordan, & Sizer, 2001; Minner, 2001; NCSS, n.d.c; Smith, Smith & Romberg, 1993; Stronge & Hindman, 2003; Walberg & Paik, 2004).

The ideas mentioned thus far do not include the specific instructional strategies teachers would use while incorporating these practices into their classrooms. Strategies would include the use of graphic organizers, note taking, summarizing, tutoring, concept development, field trips, and questioning (Berends, 2004; Brophy & Good, 1986; Fullan & Rolheiser, 2002; NCSS, n.d.c; Walberg & Paik, 2004). Marzano, Pickering, and Pollock (2001) have done extensive research on the types of specific instructional strategies to use for an effective classroom. Their findings demonstrate that the most effective strategies for students include: (a) identifying similarities and differences, (b) summarizing and note-taking, (c) reinforcing effort and providing recognition, (d) homework and practice, (e) nonlinguistic representations, (f) cooperative learning, (g)

setting objectives and providing feedback, (h) generating and testing hypotheses, and (i)

questions, cues, and advance organizers. Research shows that these strategies will

increase student achievement (Marzano, Pickering, & Polluck, 2001). Extensive research

has been done on instructional strategies and classroom practices that increase

achievement and improve education.

Zemelman, Daniels, and Hyde (1998)

Concerned with the fact that educational reform did not seem to make a difference,

Zemelman, Daniels, and Hyde (1998) began the study of curriculum and instruction

reform through best practices. They use the term best practices as a symbol of "serious,

thoughtful, informed, responsible, state-of-the-art teaching" (p. viii). Brighton (2002)

asserted that central to this approach to best practices is that teachers endeavor to provide

noteworthy, but attainable, challenges for all learners with a variety of methods and

classroom modifications. In supporting these practices, Brighton recommended them as

avenues of assistance for teachers in their challenge to meet the diversity of needs in their

classrooms which seem to be more difficult with the interest in standards.

In an effort to address the questions about standards and what shall we teach and

how, Zemelman, Daniels, and Hyde (1998) compiled research of experts and

practitioners from the fields of art, science, mathematics, reading, writing, and social

science to develop a consensus definition of best practices. Although they expected

different visions of the ideal classroom, the fundamental insights into teaching and

learning from the National Council of Teachers of Mathematics (NCTM), the Center for

the Study of Reading, the National Writing Project (NWP), the National Council for the

Social Studies (NCSS), the American Association for the Advancement of Science

(AAAS), the National Council of Teachers of English (NCTE), the National Association for the Education of Young Children (NAEYC), and the International Reading Association (IRA) were surprisingly similar.

National Council of Teachers of Mathematics (NCTM). On the heels of the Nation at Risk report, the national conference of math educators held in 1984 began the push for a national vision of mathematics education (Ravitch, 1995). In 1986 the Commission on Standards for School Mathematics was organized and by 1989 the first NCTM standards were published. One of the primary goals of this commission and the standards was mathematics literacy which included applying "knowledge actively in order to learn it well" (Ravitch, 1995, p. 127). One of the guiding principles in the standards movement that began with the NCTM remains and that is for teachers to encourage students to think, apply what they have learned to new situations and to be able to explain the process used to solve problems (Ravitch, 1995).

What NCTM emphasized with these standards is that learning the basics is important, but memorization without understanding is useless (NCTM, n.d.). The principles developed by NCTM include high expectations and equity, a curriculum built upon prior knowledge, teaching that challenges, learning with understanding, and assessment that guides and informs. These require teachers to differentiate instruction, develop understanding among the students, and provide useful feedback on learning (NCTM, n.d.).

Lubienski (2002) conducted a study using the results of the National Assessment of Educational Performance (NAEP) which is designed to assess curricular and instructional practices as well as student performance. Lubienski was interested in the extent to which

classroom experiences aligned with NCTM's vision for instruction. In analyzing data from the 1990, 1996, and 2000 results, Lubienski determined that although the scores increased for all subgroups, gaps still remained between low and high socioeconomic groups and whites, Hispanics, and blacks. Specifically, the results showed a significantly lower score for students who agreed with the statement on the test that math is mostly memorizing facts.

Lubienski (2002) surmised that instructional differences could account for the achievement disparities. Results indicated that white and high socioeconomic students were more likely than their peers to receive standards based instruction, more emphasis on mathematical understanding, and more real world application opportunities on computers. Lubienski noted that it could not be concluded that these practices caused higher achievement, only that those who received this type instruction were more likely to have higher scores.

Smith, Smith, and Romberg (1993) described what the NCTM standards looked like in one classroom. They found that the teachers who relied on standards-based instruction used more group work, hands-on activities, more problem-solving and discourse. Students were actively involved in real problems which led to understanding of the math concepts. Activities that involved problem-solving, reasoning, and communication allowed the students to show understanding and thinking in discussions. The researchers also discovered that the teacher and students learned from each other.

In a study on the effects of teacher quality variables on mathematics achievement, Kirkpatrick (2003) used an extensive questionnaire to collect data on educational background, experience, content knowledge, instructional practices, and mathematics

teaching efficacy beliefs. Two years of student data on both state and national tests were analyzed. Although the findings indicated that students' prior achievement was the best predictor of subsequent achievement, teachers' instructional practices recommended by the NCTM did appear to have a positive impact on student achievement. Kirkpatrick concluded that this study supported prior findings that indicated the use of NCTM approved instructional practices increases student achievement.

   National Council for the Social Studies (NCSS).   Following the lead of the National Council of Teachers of Mathematics, the National Council for the Social Studies developed standards based upon their vision of social studies. This vision includes instruction that is multidisciplinary, multicultural, community relevant, globally connected, and inquiry based. The standards encourage engaged, experience-based learning as well as cooperative and project-based learning that promotes reflective inquiry (Blanchard, Senesh, & Patterson-Black, 1999). There are 10 strands delineated in the standards and each strand fosters the use of these instructional practices (NCSS, n.d.a).

   In stating the pedagogical stand of NCSS specific principles of instruction are addressed. These include creating a variety of experiences using different approaches and encouraging the development of critical thinking, problem-solving, social interaction, and active engagement. In addition, teachers are urged to foster active inquiry and collaboration within and across subject areas, and use a variety of assessments to guide instruction.

   A position statement on powerful teaching and learning, the NCSS continues the themes expressed previously stressing instruction that is meaningful, integrated, value-

based, challenging, and active (NCSS, n.d.a). Meaningful learning occurs when the emphasis is on higher order questioning, critical thinking, and based on authentic experiences. Opportunities for practice embedded in authentic applications provide understanding and integration with other subjects and the real world. An emphasis on democratic principles encourages discussions on social issues through debates, simulations, and other occasions for critical thinking. Students can construct new understandings through reflective discussions and when dialogue and debate replace paper and pencil assessments. As citizens of a democracy, NCSS maintains that schools must address the development of young people for their roles as citizens and that following the standards and principles set forth will assist in that purpose (NCSS, n.d.a).

National Science Teachers Association (NSTA) and American Association for the Advancement of Science (AAAS). In a position statement from the National Science Teachers Association (n.d.b) the background for the science standards was explained and presented. Based upon research done by the American Association for the Advancement of Science (AAAS) the standards represent a vision of science education not a national curriculum. The goal of the standards according to the NSTA is scientific literacy that will be attained through these standards. The standards are not rigid prescriptions and guidelines but are dynamic and will change as society's needs change (NSTA, n.d.b).

Specifically, the standards address teacher knowledge, classroom practices, and professional development. Teachers are to promote inquiry-based learning and will need the professional development necessary to accomplish that. Teachers are to continually assess their students and themselves in relation to learning. Emphasis is to be placed on in-depth understanding and note rote memorization. Science activities are to be

developmentally appropriate, interesting and relevant to students, and integrated with the larger educational picture of the school system (NSTA, n.d.b).

NSTA (n.d.a) details scientific inquiry and recommends that it become the centerpiece of the science classroom at all grade levels. This requires science teachers to implement approaches that cause students to ask and answer questions about the world around them. Teachers would then facilitate their explorations. In an interview, NSTA's executive director, Gerald Wheeler, stated that the greatest challenge facing science teachers today is getting the training necessary to accomplish the standards. Teachers require assistance in making inquiry-based learning the key to effective and efficient scientific learning (Ezarik, 2001).

In a study of middle school teachers' instructional practices as related to the science standards, the researchers focused on the NAEP survey classroom practices and how they related to achievement (Swanson, Plank, & Hewes, 2003). Using an Item Response Theory to approach the analysis, researchers concluded that only teachers at more advanced stages of implementing standards-based instruction tended to use hands-on activities to present scientific content. Creating an inquiry-based classroom requires an increased understanding of the standards and scientific knowledge. The researchers suggested that focusing professional development on the moderately difficult practices would affect more teachers allowing them to incorporate practices such as collaborative and hands-on activities into their classrooms. Swanson, Plank, and Hewes (2003) recommended further study to determine the relationship between the standards-based principles and actual classroom practices.

National Council of Teachers of English (NCTE) and International Reading

Association (IRA). The National Council of Teachers of English (NCTE) and the

International Reading Association (IRA) worked collaboratively to develop standards for

the language arts curriculum. Without developing strict prescriptive details on

instruction, these standards provide a basis for language arts instruction. The standards

include reading a wide range of print and nonprint texts and building an understanding of

the texts in relation to the reader and to the world. Reading should be for a variety of

purposes including attainment of knowledge, pleasure, and personal fulfillment. Readers

need to have a wide range of strategies available for use in comprehension, interpretation,

evaluation, and appreciation (NCTE, n.d.).

In addition to the reading focus, standards address effective communication for

different purposes, especially written communication. Students are encouraged to

participate as members of a literacy community demonstrating knowledge, reflection,

creative, and critical abilities. This would include research as well as entertainment. The

standards address the application of language structure and conventions in a variety of

genres (NCTE, n.d.).

Although these standards are written for classroom use, the emphasis should be on

language for purposes outside the classroom (Faust & Kieffer, 1998). This requires the

students to be engaged in the learning process throughout the array of expectations

presented through the standards (Faust & Kieffer, 1998).

In reviewing the standards and bringing research-based practices into the classroom,

Denton and Vaughn (2003) maintained that a key factor in instruction is how well a

teacher takes the standards and components of effective reading instruction and integrates

them into each child's instruction. Often current research does not fit current

instructional practices due to a lack of information about implementation and lack of

belief in the research.   Professional development in the areas of research and practices is

necessary for the practices identified as effective to go beyond research and into the

classroom (Denton & Vaughn, 2003).

Consensus. Using the information gained through the standards and research in each

curriculum area, the researchers made a list of the common conclusions dividing them

into more and less columns referring to the need for more or less of a certain practice.

The less list included lecturing, student passivity, one-way communication, classroom

silence, reliance on textbooks, memorization of facts, ability grouping students, and

seatwork. The more list included experiential learning, higher order thinking skills,

reading primary sources, more student choice, attention to affective needs, cooperative

and collaborative experiences, and varied roles for teachers and students. From these

more and less lists Zemelman, Daniels, and Hyde identified 13 interlocking principles or

theories to characterize their model of education. These 13 principles are: (a) student-

centered, (b) experiential, (c) holistic, (d) authentic, (e) expressive, (f) reflective, (g)

social, (h) collaborative, (i) democratic, (j) cognitive, (k) developmental, (l)

constructivist, and (m) challenging.

Student-centered. A student centered classroom is one that scaffolds on the interests

of the students across the curriculum. This involves building on the curiosity children

bring to school and developing activities that fit their interests. Teachers weave skills,

knowledge, and concepts from the established curriculum into these areas of interest and

draw upon their expertise to ensure a balance of content is achieved. Teachers'

understanding of developmental levels aids in the creation of activities and experiences developed for the students (Zemelman, Daniels, & Hyde, 1998).

Student-centered learning includes looking at students as individuals and adjusting the curriculum as needed to best support their learning. It entails offering a range of options to students on how to present their understanding and how it will be assessed. Collaboration is an integral part of a student-centered classroom in that students have opportunities to work together to construct knowledge and be actively engaged in learning (Lake Washington School District, 1996).

Dewey was one of the premier advocates of a curriculum integrated with student interests (Fishman & McCarthy, 1998). The teacher's responsibility was to find genuine problems for students to explore that develop their interests and create experiences that require engagement with the curriculum. Although the present trend is to transmit information directly, Dewey preferred indirect instruction that occurs when students experience curricula and develop ideas themselves.

Experiential. Students of all ages learn best when they are actively engaged with the information they are trying to learn. Experiential learning has a different look in each subject area, but the implications are the same, more in-depth understanding of the concept. This includes composing and reading, working with objects, drawing conclusions, conducting experiments, taking field trips, debates, role plays, and projects. Active, hands-on, concrete learning is the most powerful and natural type of learning (Zemelman, Daniels, & Hyde, 1998). In a research study done on teaching behaviors of effective teachers, the researchers found that active engagement was of major importance

and that the more time a student spent engaged in academic activity the higher the achievement level (Taylor, Pressley, & Pearson, 2000).

Dewey (1916) maintained that students develop ideas and understand concepts through the struggles they have with materials and problems. He stated that "we cannot hand ideas to students as if they were bricks" (p.4). Fishman and McCarthy (1998) asserted that the quality of experience is paramount in Dewey's vision of success in education. This agrees with the findings of a study on classrooms of the new millennium in which researchers asserted that student involvement is crucial to learning and understanding (Moje, Labbo, Baumann, & Gaskins, 2000).

Holistic. Holistic education entails integrated learning where students encounter information in real life form. This results in new connections being made; prior knowledge becomes the building block for new information. Learning only small parts does not necessarily lead to understanding the whole (Zemelman, Daniels, & Hyde, 1998). Holistic education is concerned with each person's growth in a quest for understanding and meaning. It recognizes the innate potential of every student and strives to develop that potential (Holistic Education Network, n.d.).

Vygotsky maintained that each experience builds upon another and that new ideas and truths constantly emerge from this building (Glassman, 2004). Letteri (2001) concurred stating that memorized information is isolated and is merely stored for later retrieval while information that is linked to existing knowledge is useful. Dewey also agreed that learning is a highly interactive process that requires teachers to forget the assembly line idea and teach students to integrate skills and knowledge into their habits (Fishman & McCarthy, 1998).

Authentic. Information presented in the classroom must be authentic or it becomes too simplistic and worthless. By providing activities that relate to a child's life, the teacher brings the knowledge to the real world and gives students a reason for learning. Students need a purpose for reading, writing, calculating and investigating in order to transfer the knowledge to other situations. Authentic instruction gives knowledge value beyond the classroom (Zemelman, Daniels, & Hyde, 1998).

The research done by Moje, Labbo, Baumann, and Gaskins (2000) revealed two research-based maxims that fit authentic instruction, ample opportunities for meaningful practice and student application of specific knowledge. They maintained that the focus cannot remain on skills, but must be on the practices that utilize the skills.

Expressive. Students need to develop a range of communication modes to express and understand ideas. These would include speech, writing, drawing, poetry, dance, drama, movement, music, and other visual arts. When students can express ideas in a way different from the way they were received, understanding happens (Zemelman, Daniels, & Hyde, 1998). This fits into the research done by Gardner on multiple intelligences and the importance of addressing different modalities in the classroom (Howard Gardner, n.d.). Taylor, Peterson, Pearson, and Rodriguez (2002) observed that effective teachers emphasized comprehension and communication skills.

Reflective. Students and teachers need to reflect or think back on the experiences and or activities that occur in the classroom. This helps students to begin to gain recognition of broader principles and appreciate their accomplishments. Students become consciously aware of the reflection process and their ability to use it through a learning log or journal and therefore are able to attain new levels of thinking (Zemelman,

Daniels, & Hyde, 1998).   Fullan and Rolheiser (2002) found in their study of change

barriers that the use of metacognition in the classroom was one of the primary differences

between the more and less able learners. This reflective thinking and talking about

thinking comes from open-mindedness and responsibility (Dewey, 1997).

Social. Learning is interactional. Students learn through classroom activities that

scaffold learning through imitation and conversation (Zemelman, Daniels, & Hyde,

1998). In an interview on creating a perfect school Theodore Sizer stated that

conversation is essential in schools since students learn so much from one another

(Lapham, Gatto, Sizer, & Jordan, 2001). Dewey (1997) contended that knowledge is

relative to human interaction with the world and that through interaction with people we

build a world of meanings and concepts.

Collaborative. Closely aligned with the social aspect of learning is collaboration.

Collaboration taps into the social power through group discussions and group problem

solving. Collaborative learning taps into the abilities and interests of the group members.

It involves consensus building and the sharing of authority and responsibility. Teachers

create an interactive environment through collaboration where students take more

responsibility for their own learning and that of their peers (Panitz, 1996).

Cooperation is a valuable skill that can be taught and practiced until it becomes

habitual (Zemelman, Daniels, & Hyde, 1998). The need for collaboration or cooperation

is supported by Marzano's research on classroom practices. Researchers maintain that

teachers who employ cooperative learning methods promote learning through

engagement, activity, greater retention of material, and enhanced relationships (Fullan &

Rolheiser, 2002; Marzano, Pickering, & Polluck, 2001).

Cooperative learning takes many forms but all of them involve working in small groups to help one another learn. This format gives students the opportunity to discuss information, practice skills, and learn as a team (Slavin, 1991). Looking at 67 high quality studies on the effects of cooperative learning on student achievement, Slavin (1991) found that in 61% of the studies there was significantly greater achievement in classrooms that practiced cooperative learning. Research by Henke, Chen, and Goldman (1999) supported the theory that cooperative learning is an effective strategy to improve learning as well as motivation.

Dewey contended that cooperative behavior and processes are basic to humans and the foundation upon which strong democratic communities are built. The small problem solving groups formed in cooperative learning promote the interaction necessary to maintain the democratic principles of our country (Dewey, 1916).

Democratic. A democratic classroom is a model community based upon society. Learning in a democratic classroom is more efficient and more widely spread since it incorporates student choice and student involvement in decision making. Students in a democratic classroom learn and practice respect and what it means to be a part of a community (Zemelman, Daniels, & Hyde, 1998). Creating a democratic classroom requires involving students regularly and on an appropriate developmental level, in shared decision-making (Creating a Democratic Classroom, n.d.). Moje, Labbo, Baumann, and Gaskin (2000) stressed the importance of teaching youth how to use reading and writing in order to keep a democratic society.

A community is the basis of democracy and the source of ideals. The classroom community offers the prospect of preparing individuals to become good citizens who

understand the responsibility of contributing to the life of a community or group (Hickman, 1998). Dewey maintained that one problem with democracy is the construction of an education that will develop individuality and intelligence so that students are able to become part of a common life (Hickman, 1996). Zeichner (1997) described a democratic classroom as one that: (a) embraces all cultural identities, (b) supports equity for all students, (c) provides a challenging curriculum, (d) focuses instruction on the creation of meaning, (e) provides scaffolding for students, and (f) encourages parents and community members to be involved.

Cognitive. Memorization does not equal understanding and as teachers come to this realization there is increased emphasis on higher order conceptual learning. Classrooms are places where thinking skills are developed and students are learning to hypothesize, synthesize, analyze, and draw inferences through experiences. Metacognition is emphasized so that students become aware of the thinking process (Zemelman, Daniels, & Hyde, 1998).

Dewey (1997) asserted that in typical classrooms students' and teachers' avoidance of making an error took precedence over thinking. The minute questioning on details destroys the opportunities for discussion and exploration. Dewey referred to the practice of using lecture with students in rows as penitentiary pedagogy and maintains that good thinkers will not result from this activity (Fishman & McCarthy, 1998).

Concept development through the use of inductive thinking and actively involving students in constructing understanding will lead to knowledge. Teaching strategies to use for problem-solving and discussing how one arrives at an answer improves critical thinking skills (Fullan & Rolheiser, 2002). After studying effective schools, Letteri

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(2001) concluded that to improve achievement one must improve learning and to improve

learning students must understand the principles of information processing. This can be

accomplished through an emphasis on higher order thinking and concept development

(Marzano, Pickering, & Polluck, 2001; Zemelman, Daniels, & Hyde, 1998).

Developmental. Developmental practices include using age appropriate activities to

develop understanding. This refers to the levels or stages of schooling and maturity in

students with respect for their emerging capabilities. Children have common growth

patterns, but there are definite variations in rate (Zemelman, Daniels, & Hyde, 1998).

Constructivist. The keys to a constructivist classroom are experience, immersion,

and engagement. Students do not just receive content, but are expected to recreate and

reinvent it to fit new and changing situations. Teachers create appropriate, stimulating

settings for students to explore and experience rather than receive information. Students

"need encouragement to reflect, to share their emerging ideas and hypotheses with others,

to have their errors and temporary understandings respected – and they need plenty of

time" (Zemelman, Daniels, & Hyde, 1998, p. 15).

Bruner (1966) contended that the aim of learning is to acquire the process of inquiry

and that students do this by reorganizing and applying knowledge. The instruction in a

constructivist classroom focuses on making connections between facts and fostering new

understandings. Teachers present examples and students discover relationships and

construct understanding.

Challenging. Classrooms that are challenging offer genuine challenges, choices, and

decisions that lead to learning. It is more difficult for students to determine a topic for

study than to follow the teacher's instructions. A challenging classroom eliminates the

dependency upon teacher instructions, directions, and decisions because students take responsibility for their learning. The teacher in a challenging classroom provides a safe environment where students can experiment with increasingly difficult information and tasks (Zemelman, Daniels, & Hyde, 1998).

These classroom practices are interrelated and form a philosophy of learning supported by the professional organizations from mathematics, science, social studies, and language arts and reading (Zemelman, Daniels, & Hyde, 1998). This philosophy is manifested in different forms in different classrooms, but the underlying structure of the best practices research of Zemelman, Daniels, and Hyde (1998) are present. These best practices are also embedded in the standards document for an Early Childhood Generalist developed by the National Board for Professional Teaching Standards as evidenced by the chart in Appendix A.

Other Research on Best Classroom Practices

Walberg and Paik (2004). Walberg and Paik analyzed a variety of studies on several different topics they considered as generally powerful and consistent in promoting learning. In 29 studies on parental involvement, 91% of them favored children in homes where parents worked cooperatively with the schools. Graded homework produced positive results when used alone, but when combined with teacher feedback the effect was tripled, especially at the high school level. The quality of the assignments, the relationship to the classroom lessons, and whether or not it was in keeping with student abilities also played a role in the effectiveness of homework.

In 130 studies on aligning time on task, one of the most consistent findings was that the more students study, the more they learn as long as the activities they are involved in

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reflect educational goals. Studies on direct teaching indicate that systematic sequencing of lessons, guided practice, and feedback provide clarity, enthusiasm and flexibility in the classroom. Over 12 studies point to the importance of relating new information to prior studies. More than 50 studies analyzed by Walberg and Paik (2004) indicated that careful sequencing, monitoring, and control of the leaning process decrease problems and raise the learning rate.

Stronge Study (1997). Stronge identified six major professional functions of a teacher while emphasizing the relationship between specific teaching practices and the consequent learning process. The functions include: (a) managing and influencing student behavior, (b) administrative and clerical functions, (c) assessing student learning progress and evaluating instructional effectiveness, (d) planning the lessons, (e) implementing the planned instructional program with a variety of techniques, and (f) identifying students with similar needs and teaching them accordingly. An effective teacher accomplishes these functions while adapting the content and concepts to each student to ensure understanding of the subject matter and clear up any misconceptions.

Waxman, Huang, Anderson, and Weinstein Study (2003). This study was done in a large urban school district in the south central region of the United States and focuses on classroom processes that have potential for improving students' education outcomes. The researchers determined the relative efficiency of each school using an efficiency analysis to identify schools that are wisely using their resources and those who are using them poorly. They also used a multiple regression analysis of achievement to determine the level of each school's effectiveness based on the previous year's achievement test scores. The district's schools were placed on a diagram with two coordinates to represent the two

dimensions, effectiveness and efficiency thus identifying E/E (efficient/effective) schools and I/I (ineffective/inefficient) schools for the study.

Four schools from each group were randomly selected. These schools were similar in demographics with the exception of school size, class size, and ethnicity; there were more Latino students and teachers at the E/E schools and more African American teachers at the I/I schools. Grades three, four, and five were observed midyear and fourth and fifth grade students completed a survey in the spring. The survey examined motivation and their perceptions of their learning environment.

Waxman, Huang, Anderson, and Weinstein (2003) found that students worked in small groups and individualized settings significantly more often in E/E schools than in I/I schools. Students in I/I schools spent significantly less time on written assignments than did students in E/E school. In reviewing classroom interactions between teachers and students, they noted them occurring only 47% of the time in I/I schools while in E/E schools interactions occurred 70% of the time. In I/I schools there were no interactions present 40% of the time. They also concluded that there was too much passive learning in both the E/E and I/I schools. Their data was given to the school district to be used to improve instructional practices.

Brophy and Good (1986). In reviewing the research from the 1960s and 1970s, Brophy and Good summarized the conclusions about teacher behaviors that maximize student achievement. The most consistently replicated studies linked achievement to the quantity and pacing of instruction which includes classroom management, engaged time, success, and active teaching. Findings also indicated that information delivery was most effective when accompanied by advanced organizers, overviews, a review of the

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objectives, outlining, organizing concepts, clarity, sequencing, redundancy, and pacing.

Questioning showed evidence of a variety of cognitive levels and degrees of difficulty, as

well as clarity and wait time. Brophy and Good cautioned that the causal relationships

they found linking teacher behaviors to student achievement were not always clear and

thus should not be translated into prescriptions for best teaching practices.

Marzano and the Dimensions of Learning. Hardiman (2001) developed a series of

best practices from linking brain research to Marzano's dimensions of learning. Nine

practices should be in evidence according to the findings: (a) a challenging yet supportive

classroom environment; (b) explicitly taught peer acceptance and social behaviors; (c)

new information in context with prior information; (d) stimulating materials and

manipulatives; (e) integration of art, music, and movement into learning activities; (f)

opportunities for students to compare and analyze work, identifying patterns underlying

concepts; (g) requiring students to investigate, analyze, and problem-solve with real

world problems; (h) provide multiple ways to demonstrate understanding; and (i)

opportunities to engage in metacognitive reflection. These nine best practices incorporate

the knowledge gained from brain research as well as research on how students learn.

Wenglinsky Study (2002). This study explored the link between classroom practices

and student academic performance using the 1996 National Assessment of Educational

Progress (NAEP) math results. Using a multilevel structural equation modeling to

distinguish between school and student level effects, to measure relationships among

individual variables and to explicitly model measurement error, Wenglinsky studied

7,146 eighth graders who took the 1996 NAEP math test. The results found that the

classroom practices had an effect at least as strong as student background.

Using the characteristics of effective schools as defined by the research for effective schools (Lezotte, 1992), Wenglinsky found that in comparison with student background; the effects of effective schools are modest. Using seven teacher characteristics identified in the Coleman Report (Coleman, Campbell, Hobson, McPartland, Mood, Weinfield, & York, 1966): (a) years experience, (b) educational attainment, (c) scores on vocabulary test, (d) ethnicity, (e) parents' educational attainment, (f) whether teacher grew up in the area in which teaching, and (g) the teacher's attitude toward teaching middle class student, the study found these explained less than one percent of the variation in scores.

Wenglinsky (2002) cited research that shows only two areas of relationship between student outcomes and teacher inputs: amount of coursework the teacher pursued in a relevant subject area and the teacher's score on a basic skills test. He also cited research showing that students whose teachers stress higher order thinking skills outperform those whose teachers did not convey higher order thinking skills. With this information background Wenglinsky developed two hypotheses concerning three aspects of teacher quality: classroom practice, professional development, characteristics external to classroom. Wenglinsky hypothesized that of these aspects, practice will have the greatest impact and teacher input, the least. Also that teacher quality is as strongly related to student academic performance as student background characteristics.

This study is not without its critics. Podgursky (2001c) maintained these assumptions cannot be made since longitudinal data is not available. He insisted that Wenglinsky cannot determine whether the higher order thinking skills led to higher achievement or whether the higher achievement led teachers to emphasize higher order thinking skills.

Knapp and Shields Study (1995). The purpose of this study was to describe and analyze instructional practices in 140 first through sixth grade classrooms in 15 elementary schools with large numbers of low income families. The schools were from six different districts across three states and all had better than average performance on conventional measures of achievement. For the purpose of the study only experienced teachers were chosen and studied over a two year period. This included periodic observations, repeated interviews, examination of curricular materials, informal conversations with students, daily teacher logs of what was taught, and various forms of student assessments.

Instructional strategies varied across the subjects, math, reading, and language arts, but there was clear evidence that some strategies were more effective. These included active engagement and an emphasis on teaching for meaning. Results indicated an association between an emphasis on meaning and the students' capacity to compose text, reason mathematically, and comprehension, however these were largely unaffected by factors such as amount of instructional time, attention to discrete facts, teachers' backgrounds, or teachers' proficiency in management. This meaning oriented practice worked as well for high and low performing students. Knapp and Shields (1995) asserted that their study dispels the myth that children in high poverty classes should not engage in academically challenging work because they are not ready for it.

Taylor, Peterson, Pearson, and Rodriguez Study (2002). In this study, the researchers chose eight high poverty schools with 70-95% free and reduced lunch, and 67-91% minorities in three areas, the rural southeast, a large Midwestern city, and a large southwestern city. They observed 14 teachers in grades kindergarten through sixth three

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times for an hour each time. The students in these classes were divided into three groups (high, average, low) based upon reading proficiency with two from each group chosen for assessment.

Results indicated that the occurrence of small group instruction is greater in the most effective schools. Also present in the most effective schools was a balance of word work and comprehension which is consistent with the National Reading Panel findings. Higher level questioning and writing related to stories prevailed in the most effective schools. The more experienced teachers preferred coaching students while the less experienced relied on telling students information more often. A significant negative relationship was found between telling teachers and student fluency in reading. Reading comprehension had a positive relationship with higher level questions and a significant negative relationship with a telling teacher. One consistent finding in the study was that the more a teacher was coded on the observation sheet as a telling teacher, the less the students grew in reading achievement providing evidence that a coaching, modeling, and scaffolding stance is the more effective one for student achievement.

Center on Organization and Restructuring of Schools. In a five year study of classrooms through the University of Wisconsin/Madison, researchers tried to answer the question, what does good teaching look like (Protheroe, Lewis, & Paik, 2002)? Researchers identified three characteristics of what they termed intellectual work in the classrooms: (a) students constructed new knowledge based upon previous knowledge, (b) students engaged in disciplined inquiry, and (c) students knew how to use knowledge outside the school environment. The students were not repeating what they already knew or what had been provided to them by their teachers, but were organizing, synthesizing,

and evaluating information through the lenses of their prior knowledge. Gaining in-depth understanding of problem-solving and using more elaborate methods of communicating ideas and findings, students exhibited their new knowledge through real life situations not just exams or quizzes.

In order to provide this type of instruction teachers need to be able to engage students in higher order thinking skills, address central ideas thoroughly to help students acquire deep knowledge, foster meaningful conversation among the students, and connect student learning to the world beyond the classroom. This requires teachers to work harder than following a textbook and direct instruction require.

Pape, Bell, and Yetkin Study (2003). Pape, Bell, and Yetkin (2003) began with the hypothesis that to engage in the social negotiation of knowledge, students need to move beyond the role of passive learners to develop mathematical understanding in an inquiry context in order to analyze situations, examine their own thinking, and justify their reasoning. To prove this they studied seventh grade students in a medium sized Midwestern city. Fifty-eight percent of the students were African-American, 41% were white, 1% were a mixture of Hispanic, American Indian, and Asian while 49% were on free or reduced lunch. Two groups of students were studied: one class of pre-algebra students with above average ability and experience and one class of regular students, many below average who often struggled to understand math concepts.

All students made daily observations in a log and recorded the strategies they used to learn math. Researchers collected examples of student work, recorded videos of classroom practices, and made several classroom observations taking notes. Using all of these artifacts they found that two features stood out as critical to learning, the use of

multiple representations and rich mathematics tasks. Classroom practices included giving students opportunities to engage in thinking about problem solving and creating complex representations as supports for their thinking. Scaffolding was provided by the teachers through questioning which helped to focus the discussions on how student behaviors helped them accomplish their goals. Differentiated support was given as needed. All students in these groups showed significant growth although to varying degrees. Pape, Bell, and Yetkin (2003) maintained that the realistic and challenging tasks given to students, the varieties of teaching methods used, and the classroom climate that encouraged discussions were instrumental in the growth.

Summary

The educational reform movement that began with the publication of *A Nation at Risk* (1985) continued with *A Nation Prepared: Teachers for the 21st Century* (NCEE, 1986) and Goals 2000 and presently is active in the No Child Left Behind legislation. The continuing theme throughout the reform movement is the need for quality teachers since research efforts in student achievement support the notion that teachers make the difference in student achievement (Archer, 1998; Fallon, 2003; Haycock, 1998; Mendro & Bembry, 2000).

The literature establishes that evidence on what constitutes an effective or quality teacher is often conflicting ranging from verbal ability to subject matter knowledge to classroom management (Darling-Hammond, 1999; Stronge & Hindman, 2003). The evidence on what makes a quality teacher is varied and research findings are mixed. In an effort to define accomplished teaching the National Board for Professional Teaching Standards (NBPTS) was formed based upon the recommendation of the National

Commission on Teaching and America's Future (1996). The research evidence on

effective teaching formed the basis for the core propositions of NBPTS in its effort to

recognize accomplished teaching (NBPTS, 2000). The mission of NBPTS is to advance

the quality of teaching and learning by verifying accomplished teaching (NBPTS, n.d.).

Earning the National Board Certification credential attests that the teacher has been

assessed by peers as one who is accomplished, makes sound professional judgments, and

acts in accordance with those judgments (Shakowski, 1999).

While many support this process of recognition, the literature confirms that there is

opposition as well. Burroughs (2001) considered the certification process to be as much

an evaluation of a teacher's writing ability as his or her teaching, and considers rhetoric

to be an unwritten standard for certification. Some critics argue that the certification

process is controlled by the teacher unions and is only a vehicle for them to control the

world of teaching and teachers (Holland, 2002; Podgursky, 2001b; Stone, 2002). Others

argue that awarding the certification for 10 years creates the impression that expertise is a

state of being instead of becoming (Bullough, Burbank, Gess-Newsome, Kaucheck, &

Kennedy, 1998).

While the NBPTS recognizes accomplished teaching, the literature does not establish

that the certification ensures that teachers are using research-based best practices in their

classrooms only that they are expected to demonstrate the practices in their portfolio

submissions. Podgursky (2001d) was critical of the entire process arguing at best, the

National Board Certification tells the public that the teacher knows how to be a good

teacher, but not that they put the theory into practice.

The literature establishes an extensive research base in classroom practices both relating to National Board certification and teacher practices in general. The skills needed in education today differ from those of the past. Attention needs to be focused on learner engagement, connecting new information with prior knowledge, and higher order thinking skills (Brophy & Good, 1986; Darling-Hammond, 1997; Patton, 2001; Stronge & Hindman, 2003).

Zemelman, Daniels, and Hyde (1998) have taken this research on effective practices and combined it with the principles established by the professional organizations in reading, language, math, science, and social studies to determine a set of best classroom practices. In their study of best classroom practices, they concentrated on the standards and principles of the International Reading Association, the National Council of Teachers of English, the National Council for the Social Studies, the National Council of Teachers of Mathematics, and the National Science Teachers Association. While reviewing this literature, the researchers discovered a consensus of characteristics or principles of best practices.

A review of the literature on effective or quality teaching and best practices, although extensive, reveals that there has been little attention paid to the actual classroom practices of National Board Certified Teachers in comparison to those who have not applied for the certification. Shulman (as cited in Davis, 1997) called for robust and thickly textured case studies of practices so that the practices can be seen in context. This study was undertaken to do just that. Using the best classroom practices established through the research of Zemelman, Daniels, and Hyde (1998), the intent of this dissertation was to

compare the classroom practices of teachers with and without the National Board

Certification to determine if indeed there is a difference in these classrooms.

CHAPTER THREE: METHODS

Teachers who go through the National Board for Professional Teaching Standards (NBPTS) certification process invest at least a year of their time and a minimum of $2300. West Virginia Department of Education pays the entire cost for those who successfully complete the process, $600 in expenses, and a yearly stipend of $2500 for a 10 year period to teachers who attain the certification. One of the identifiers that West Virginia has used to designate a highly qualified teacher under the No Child Left Behind legislation is one who attains National Board Certification. This degree of time and financial commitment on the part of teachers and West Virginia raises the question, "Are classroom practices of National Board Certified teachers different from those of other teachers?" The purpose of this study was to examine and compare the classroom practices of a select number of teachers in West Virginia, those with National Board Certification and those who had not gone through the certification process.

This chapter will describe the research design and the population and sample for the study, including the methods used for data collection and data analysis. Reliability and validity issues will also be addressed.

Research Design

This study was a multi-site, qualitative descriptive and evaluative case study.   It incorporated observations, interviews, and a checklist to generate qualitative and quantitative data analysis. It was multi-site because data were collected at 10 separate sites/classrooms. The study was a qualitative descriptive case study because it presented a detailed account of the classrooms under study (Merriam, 1988). The description of the classrooms under study was the end product. It was an evaluative case study because it

involved description, explanation, and judgment produced by weighing the information (Lincoln & Guba, 1985; Merriam, 1988).

A case study is used when how or why questions are asked about a contemporary set of events (Merriam, 1988; Yin, 2003). In reviewing the classroom observations during the interview process, the researcher explored why certain practices occurred. This study fits the four characteristics or essential properties of a qualitative case study according to Merriam (1988): (a) it is particularistic in that it focuses "on a particular situation" (p. 11) on a small scale; (b) it is descriptive in that it interprets the meaning of the data collected through a "complete, literal description" (p. 11); (c) it is heuristic due to the fact it "illuminates the reader's understanding of the phenomenon" (p. 12) and to confirm what is known, and (d) it is inductive, discovering understandings and relationships rather than confirming a predetermined hypothesis. This study focused on classroom practices of 10 teachers to discover any relationship between the National Board Certification process and these practices.

Population and Sample

There were two populations for this study: a) West Virginia teachers in grades one and two classrooms that have National Board Certification and b) West Virginia teachers in grades one and two classrooms who had not applied for the certification. The populations were limited to these two grade levels since there is a general similarity among these age groups and both are covered under the Early Childhood Generalist certification for NBPTS. According to the West Virginia Department of Education there are 456 public schools in the state and 2,277 teachers serving grades one and two. These numbers were narrowed to 250 schools and 1,322 teachers by eliminating all counties

where there are no National Board Certified Teachers. There are 56 West Virginia teachers who hold National Board Certification in Early Childhood Generalist (NBPTS, 2004a).

The population of National Board Certified teachers, who agreed to participate in the study, was divided into counties and one teacher was randomly selected from each county. A sample of five teachers was randomly drawn from this NBCT population to represent five different counties to ensure as much variation and representativeness of the population as possible with this small sample size (Glesne, 1999; Maxwell, 1996).

Participants from the population who had not applied for national certification were chosen as a matched sample to correspond with the NBCT sample as closely as possible as to grade assignment, experience, and county as responded by teachers. This sample was chosen by identifying teachers from the counties of the selected NBCT participants. Next a group equal in number to the NBCTs in the first population was randomly selected. From this group, one teacher was selected from each of the five NBCT counties chosen. The chosen teacher was matched with the NBCT sample as closely as possible as to grade assignment, experience, and county. This type sample was used to establish the comparisons necessary to the study.

Field Notes

Classroom observations consist of the researcher in a teacher's classroom recording what is occurring in the classroom throughout the day. Field notes are same day written accounts of "what the researcher hears, sees, experiences, and thinks in the course of collecting and reflecting on the data" (Bogdan & Biklen, 2003, pp. 110-111). These notes consist of two different kinds of materials, descriptive and reflective. Descriptive

field notes record the details of what is seen and happened in the field. Reflective notes are the observer's comments on what has happened, including comments about what the observer is learning, any ethical dilemmas or conflicts, points of clarification, or the method itself. The first reflections should be done before the first observation to elucidate any assumptions or expectations the researcher may have about the study (Bogdan & Biklen, 2003).

A researcher developed list of codes was used to record the classroom practices observed. The items on the list of codes were developed based upon the research on best classroom practices by Zemelman, Daniels, and Hyde (1998). The list of codes was used following the observations to assist the researcher in setting the context for the practices. The purpose of the discussion was to compare what the researcher found concerning classroom practices with the teacher's perceptions of classroom practices during the observation.

Reliability and Validity

Lincoln and Guba (1985) suggested thinking of reliability in a qualitative study as dependability or consistency of results gained from the data. Since reliability is the extent to which findings can be replicated (Merriam, 1988) and replication is not the purpose of a case study, one needs to consider reliability in a different manner. Merriam (1988) maintained that achieving reliability in a traditional way is fanciful, but that dependability can be determined through the uniformity of the results gained from repeated observations. This study included 10 observations so that the reliability of the results were confirmed through the consistency of the findings.

Internal validity is how one's findings match reality. Merriam (1988) stated that validity "must be assessed in terms of interpreting the investigator's experience, rather than in terms of reality itself (which can never be grasped)" (p. 167). Qualitative research is interested in perspectives rather than generalities and it is the researcher's obligation to present an objective rendering of the participants' views of themselves and their experiences (Merriam, 1988). This was accomplished by taking extensive field notes that were reviewed daily and by recording the interviews.

To ensure internal validity Glesne (1999) recommended these strategies: (a) prolonged engagement, gathering information over a period of time; (b) triangulation, using multiple sources of data such as observations, interviews, and checklists; (c) member checking, comments or thoughts on drafts of the findings by participants; clarification of researcher bias, reflection on subjectivity and assumptions from the beginning; and (d) thick, rich description that allows the reader to enter the context of the research. Member checking denotes the teacher's input during the interview to clarify the observations. This study was conducted over a course of 10 weeks and included 40 observations, 40 checklists, field notes from each observation, and 10 interviews.

Data Collection

A personally addressed letter was sent to each grades one and two teacher in West Virginia detailing this study and asking for their participation (see Appendix B). The letter provided information on the purpose of the study and the procedures for gathering data. A response form was included in the mailing (Appendix C), which included the participant's name, email or postal address, grade level, years of experience, school name, county, whether they had applied for national certification, national certification

status, and highly qualified status. By completing and returning this response form,

teachers demonstrated their willingness to participate in the study. These response forms

were used for sampling purposes and for future contact with the participants.

Building and county level administrators were notified at this time to request

permission to conduct the research in the schools (Appendices D & E). Each willing

participant, for whom building and county level permission had been received, was

contacted after the sample had been determined for notification of status in the study.

Those selected for the study were notified about the scheduled observations and

interviews. Teachers not selected to participate in the study were also notified (see

Appendix F). All of those who agreed to participate, whether chosen or not, were offered

a copy of the results of the study.

Once the sample was determined and the schedule for observations completed, the

researcher began the observations. Each participant was observed for four consecutive

days. While observing the teacher, the researcher documented the use of best classroom

practices using field notes to document the practices and the context in which they

occurred. This included, but was not limited to, the subject being taught, room

arrangement, assignments and/or activities, and student groupings. The researcher

collected artifacts during the observation including, but not limited to lesson plans,

assignments, worksheets, assessments, and classroom diagrams or photos.

On the third or fourth day, the researcher interviewed the teacher. The interview

questions were based on the observations, but centered on why certain practices were

used. Specific questions were used to begin the interview (see Appendix G) and others

were developed as the interview progressed. The interviews were recorded and

transcribed by the researcher. At the end of each teacher's observation and interview the

researcher had field notes, a variety of artifacts, and interview transcriptions.

Data Analysis

Data analysis included data interpretation. Data from the interviews, observation

checklist, and observation field notes were used to develop a qualitative descriptive

account of the findings. Emerging themes were explored and an interpretation of the

findings was related to the literature and the idea of best classroom practices. Lincoln

and Guba (1985) described data analysis in qualitative research as open-ended and

inductive. Lincoln and Guba maintain that:

> what is at issue is the best means to make sense of the data in ways that will, first,
>
> facilitate the continuing unfolding of the inquiry, and, second, lead to a maximal
>
> understanding … of the phenomenon being studied in its context (pp. 224-225).

As the data were organized and reviewed, certain words, themes, and/or events

appeared regularly.   These became the topics or patterns that gave the means for sorting

the descriptive data collected. These became coding categories for the data and were

developed both during and after data collection (Bogdan & Biklin, 2003).   The identified

13 best practices (Zemelman, Daniels, & Hyde, 1998) served as a framework for the

coding categories.

The initial step in analysis was reading the field notes each day and listening to and

transcribing the interview each week. During this procedure notes were kept on tentative

ideas about categories and relationships. This was an ongoing process that lasted

throughout the 10 week observation period. The coding categories that developed from

these themes along with the 13 best practices were used to "fracture the data and

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rearrange it into categories that facilitate the comparison of data within and between these categories" (Maxwell, 1996). Since this study was addressing questions of similarities and differences across settings, a categorizing analytic strategy was most appropriate (Maxwell, 1996). The categories and connections changed as information was gathered and processed and patterns and themes began to emerge.

Possible themes for this study included the specific classroom practices observed such as collaborative, experiential, or holistic activities. Themes included the contexts in which these practices took place, for instance during reading class. Other categories dealt with the sequence of activities occurring in the classroom or the rationale for using a specific activity. Themes that emerged from the review of the field notes included the manner in which teachers handled transitions, the role of research in teaching practices, and modeling and scaffolding. As the categories and themes developed they became more clearly defined (Lincoln & Guba, 1985). Since the researcher was looking for specific practices in each classroom some coding categories were designated at the beginning of the research study. These included the 13 best classroom practices: student-centered, experiential, holistic, authentic, expressive, reflective, social, collaborative, democratic, cognitive, developmental, constructivist, and challenging (Zemelman, Daniels, & Hyde, 1998).

CHAPTER FOUR: DESCRIPTIVE DATA

This study was designed to examine and compare the classroom practices of 10 teachers in West Virginia, five with National Board Certification and five who had not gone through the certification process, but are considered to be highly qualified. Data for this study were compiled through 40 classroom observations and 10 interviews and consisted of field notes, classroom floor plans, and artifacts from the class such as lesson plans and homework. The purpose of this chapter is to describe the 10 teachers, their classroom practices, and their classrooms.

Demographic Data

The 10 respondents chosen represented five counties, two per county with each county in a different Regional Education Service Agency (RESA) in West Virginia. Six participants had 24 years or more teaching experience and four had 12 to 18 years experience. Teaching experience at their present level ranged from 1 to 20 years. Nine participants had a master's degree, seven in elementary education and two in related areas. According to West Virginia Department of Education guidelines all were considered highly qualified. West Virginia recognizes highly qualified teachers as those who have attained National Board Certification, those who have successfully completed the appropriate PRAXIS assessment, or those who have satisfactory yearly evaluations as per West Virginia's evaluation system (Walsh & Snyder, 2004). All participants were white and female. Displayed in Tables 1 – 4 are the demographics of the participants.

Table 1

Degree Level of Participants

Degree Level	National Board	Non-Certified
BA +30	1	0
MA +15	0	2
MA +30	1	2
MA +45	3	1

Table 2

Overall Years of Experience of Participants

	National Board	Non-Certified
Teacher #1	18	24
Teacher #2	29	12
Teacher #3	12	35
Teacher #4	15	28
Teacher #5	28	27

Table 3

Years of Experience of Participants at Present Level

	National Board	Non-Certified
Teacher #1	12	7
Teacher #2	1	3
Teacher #3	5	20
Teacher #4	10	6
Teacher #5	5	8

Table 4

Highly Qualified Teacher Determination of Participants

Highly Qualified Determinant	Non-certified	National Board
Met Standards	1	2
Masters in Elementary Ed	4	3
Praxis	0	0

Case Studies

The journey into the study of classroom teachers' practices began in mid September and lasted until Thanksgiving vacations so procedures and routines were in place but the year was still new. There were 10 scheduled observations as part of this journey, two in each of five counties. Five of these observations were in the classrooms of National Board Certified Teachers (NBCT) and five observations were in the classrooms of teachers who had never pursued this certification. Each observation represented a distinctive picture of a classroom with evidence of similarities, as well. Although the journey began and ended with no specific order, this description of the journey will begin with the NBCTs and continue with those without the certification.

National Board Certified Teacher Number One

Setting. Observation one was at a fairly new school in a poor area of town. The school was one of the newest and more attractive buildings in the neighborhood, which consisted of many old homes and subsidized housing. The bright, colorful building was one story with a lot of windows. Upon entering the building I saw student work and signs directing visitors to the office area. The three first grade classrooms were located down the hall from the office past the cafeteria, art room and gymnasium. As I traveled to the first grade classroom I found the halls were decorated with student work and notices of school events. NBCT One was in the first grade room in the middle.

Her room was of average size and was full of materials, had a variety of areas for students to work, and students' writing, with artwork displayed around the room. The students sat at tables, but spent much of their time working on the carpeted area and at centers such as the writing center, math center, library zone, computers, and the guided

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reading table with the teacher. The classroom walls were covered with information that students were encouraged to use while working. This included touch math posters, word wall words, reading strategies, handwriting examples, an editing checklist, the alphabet, a number line, and a calendar. Walking into the room I can saw that it was arranged for the students and not for the teacher since her desk is in a corner out of the mainstream of the classroom. The arrangement and student work, posters and charts of information appeared to create an atmosphere of learning and fun.

Morning routine. During the four days in this classroom I found firmly established routines so that the schedule of events for each day only varied slightly. The description of classroom activities included all four days as a composite rather than each day individually.

As students entered the room in the morning they were expected to put away their belongings (each has his or her own locker), turn in their folders, and mark their lunch preference by placing a wooden hand on the locker door. Students drifted in from the buses and cafeteria using this time to sharpen pencils and use the bathroom before beginning work on a booklet of animals of the 50 states. Each day's routine was the same and children followed it with little or no direction. When all the buses were in and all students were back from breakfast the work of the day commenced.

Math procedures and instruction. First on the agenda for each day was a school wide math project that included the Title I teacher doing math rhymes with students to assist with the memorization of math facts. Students were sitting in their desks responding to the rhythm exercise while the classroom teacher was preparing materials for centers and guided reading. This activity was followed by a problem solving activity

modeled by the teacher using an overhead projector as students worked on individual papers. During this time the teacher used rhymes for the formation of numbers and incorporated reading and writing into the activity by using word problems containing new word wall words and having students label their answers. Other math activities included using the hundreds chart to recognize numbers, count to 100, count by 10s, by fives, and by twos, connecting numbered dots, and practicing touch math. Each of these included manipulatives, opportunities for hands-on activities, and teacher modeling.

Center time followed the math activities with two groups working with a teacher (classroom teacher and Title I teacher) and one working independently. Routines for each center had been established and it was apparent that students knew how to proceed. The independent group worked on a math paper that reinforced the skills taught earlier in the day and when students finished they went to the architecture center where and worked cooperatively to complete a structure. The Title I center consisted of games reviewing the skills from previous lessons and the teacher center worked on patterns using vowels and consonants in the children's names. The number of squares on each child's paper differed according to each one's ability. Some students had their names already written in the squares for the first few repetitions. While the students were writing in their names the teacher sang a rhyme about vowels and helped each child individually as needed. Students identified the vowels and consonants in their names. They colored the vowels one color and the consonants another color and then looked to find a pattern in the finished product. Each day the students practiced creating patterns using a variety of manipulatives including their names, colored cubes and paper strips. As the different groups moved through this center during the week, the strategies changed. One group in

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particular needed more time and more help and both were made available. Two boys

asked if they could do the project in a different way and she told them they could use any

method they wanted as long as it fit the final product.

   Language Procedures and Routines. Children transitioned from this activity to a

reading activity on the carpeted area following a musical or rhythmic signal. One group

went to Title I reading while the teacher worked with the other group. The teacher

reviewed the book which was introduced on the previous day, by talking about the title,

author and illustrator and then discussed the characters with the students. She reread the

story while some of the students read along with her and then asked students for stars and

wishes. The stars are what they liked about the story and examples of wishes are reread

the story, be like the main character, or do something that was in the story. This

discussion was followed by an interactive writing activity that focused on the setting.

During the writing activity the teacher modeled strategies such as going back and

rereading, spaces between words, resources available on the walls, and editing format.

Terms such as punctuation were used instead of period or comma to introduce students to

the proper terminology. When the writing piece was complete the students used it to find

various words and symbols as directed by the teacher.

   This activity with the story was continued over the next two days when students were

asked to do a five-finger retell of the story after they read the title and author by

themselves. The retell began with a review of what they had already done and continued

with the problem, several events in the story and the conclusion. From this story about

animals came an activity in which students created their own story titles about an unusual

animal. Students helped each other name an animal and a possible silly sound for each to

make and then went to their seats to create their title and begin their picture for their book cover. The teacher connected this project to their work in the mornings on the state animals and modeled what the book cover might look like when complete.

When the teacher noticed students beginning to squirm in their seats she actively involved them in songs by Dr. Jean, a noted early childhood instructor, which led to a transition to a handwriting activity. Students were reminded of proper posture and pencil holding through a poem posted in the room and recited by the teacher, followed by the teacher modeling the writing of the letter N and talking through each step as they worked. Students practiced making the letter until bathroom break time.

Upon return from the bathroom they went to the carpet where they listened to a poem and clapped each time they heard a word with the /n/ sound in it. Other activities during this time included clapping out the number of syllables in words using a familiar song to introduce each word, and a review of the week's word wall words.

The teacher introduced a new poem each day by first reading it to the students and then with the students. Each poem had a hook to help students remember it. These hooks included a band-aid when the fish bit a finger, graphing favorite kinds of cookies mentioned in the poem and eaten by the students, and a giraffe's hat for the teacher when it was about a giraffe. Writing and illustrating something about the poem in a poetry journal followed the reading. No help was provided for spelling other than being directed to use the resources around the room. Classical music played during their writing activity. Students recognized Tchaikovsky as the composer from previous experience with the music.

Complementary activities. Each day after a break for lunch and recess, students went to the carpet area for a class meeting which began with activities concerning the calendar including the days of the week, months of the year, weather, tally marks for the number of days in school, place value and patterns on the hundreds board. A problem solving activity followed using rubber creatures to help with visualization of the problem. When they had discussed the problem and settled on a number sentence, the teacher wrote it on a whiteboard and students solved it and then read it in unison. When the problem was solved the students took a bathroom break and returned to the room for a variety of activities.

Activities during this block of time varied from day to day, but always included games or music to practice the week's spelling words, which were also the word wall words. Other activities included silent reading, student conferencing, computer time, Weekly Reader, read aloud, and on Friday a spelling test. Papers for the spelling tests were all folded to designate two columns but some had the beginning letter written for each word in yellow marker, some had the paper already numbered, and others had a blank sheet of paper.

Closing routine. The final transition for the students each day included cleaning up their desks, packing their book bags, and preparing for art, music, or physical education. Upon return from their special class students sat on the carpet and listened to a story until the buses were announced.

Observer comments. In this classroom there was evidence of all 13 best practices as identified by Zemelman, Daniels, and Hyde (1998). This classroom was student-centered with opportunities for large group, small group, and independent work during which

students were engaged in their learning. Throughout each day, students had the chance to collaborate, socialize, and engage in hands-on learning. Activities in the classroom such as the calendar, manners, and counting, are presented so that the children understand their relationship to the real world.

Although there was evidence of differentiated activities that are age appropriate there was also evidence of a challenging environment in which the teacher expected students to maintain a respectful attitude toward themselves and others and accept responsibility for their own actions and possessions. Students in this classroom were given choices.

Reflection was an important part of the classroom atmosphere both by children and the teacher. The use of learning logs encouraged reflection and the integration of subjects as well as the expressive nature of learning in this teacher's classroom. Students are encouraged to try new ways of thinking and are challenged to think about why, not simply who and what when reading or writing. See Appendix H for a transcript of the interview.

National Board Certified Teacher Two

Setting. Observation two took me to a larger city school close to a main highway in a fairly affluent section of town evidenced by the low percentage of free and reduced lunch children. The school was an older one that had been in use for many years; in fact the teacher from this school, attended school in the room in which she now teaches. The entrance to the school welcomed visitors and directed them to the office to check in. From there I traveled down the hallway past numerous student displays to one of two first grade classrooms.   NBCT Two, who was in the hall at her door welcoming students to her room as they came to class from the cafeteria and breakfast, greeted me.

The classroom was of average size with materials accessible to students and some stored higher for teacher access. Student work was displayed around the room. The student desks are arranged in groups of four like tables in the center of the room with areas around the sides for a listening center, reading table, art center, science display area, and math center. The walls were covered with useful student information on manners, a number line in words and numerals, a helper's chart, the Pizza Hut Reading Program chart, alphabet cards, a calendar pocket chart, study skills for spelling, a word wall, classroom rules and rules for good listening, math vocabulary and essential questions for both math and reading such as "why are numbers so important?", and "how do I know what a word means?" Tubs containing math and science supplies were covered with pillows and used as seats for the carpet area and during library center. The room was arranged for student use with the teacher's desk in the back corner out of the main flow of the room. The atmosphere appeared to be one of fun, student learning, and information.

Morning routine. The routines were well established and although this observation lasted for four days, the days are treated as a composite. As students entered the room they were greeted by the teacher, put up their book bags, went to the bathroom, sharpened pencils and settled into their seats to read a book. Lunch count was taken during this time by counting empty desks and cold lunches on the lunch tree. Announcements were made from the office followed by the Pledge of Allegiance and a teacher announcement of student jobs for the week.

Language procedures and instruction. The actual work of each day began with a reading group going to the table with the teacher, three students to the computer to work on Compass (state adopted computer program for reading, language, and math) and Accelerated Reader (AR), and the rest in their seats reading. Students wrote their names on the board to notify the teacher they were ready to take an AR test. When the group was finished all students returned to their seats to read the morning message posted on the chalkboard in the front of the room. The message pertained to something that happened on the previous day or something that would happen on that day.

When the teacher was finished with one reading group all students returned to their seats and read the Morning Message in unison. During this time unknown or unusual vocabulary words were discussed and explained. Observe was in the message on the first day and the teacher explained it meant to watch and related it to what I was doing in the classroom with them. She later added this word to their vocabulary words for the week. When the discussion ended all students went to the carpeted area with the teacher to review the previous day's Daily News, which was reported by one of the students and recorded by the teacher each afternoon. Students read the news in unison and then the teacher used the message to review capital letters, vowel sounds, spelling words, and compound words. One day the students recognized a sentence did not make sense the way it was written and the teacher led them in a discussion on how to correct it using the proper editing marks.

Following this discussion, the teacher introduced fables to the students and new vocabulary related to fables along with their work for the week. Words were added during the week as they came up in conversation such as observe. Later in the week

instruction was interrupted for class pictures and the teacher explained the word flexible

to the students when they had to rearrange their schedule. Flexible became a new

vocabulary word for them to use. Continuing with the discussion on fables, she reviewed

a fable the students had read earlier in the year and then asked them to define a fable.

After students decided a fable was a story with a message that was handed down orally

and had animals as characters, the teacher used a poster explaining fables to introduce the

elements of a fable. This led to a discussion on the meaning of conflict, fact and fiction,

and that fables teach a lesson. Students read a variety of fables during the week including

two versions of the *Crow and the Fox,* which was used to compare similarities and

differences and to talk about why they might be different. During the week students used

the fables to read silently, with partners, and as a play with all students participating. The

fable about the wind and the sun caused some difficulty because of the reading and

meaning of quarrel. Students predicted what it meant and gave reasons for their answers.

After reading the fable, they discussed whether they were correct in their predictions.

Students used a story worm graphic organizer to display the story elements, such as,

characters, setting, events, moral and favorite part of the fable *The Wind and the Sun*. As

they worked on their worms, the teacher reminded them that there was no one right

answer and of proper writing such as finger spaces and neatness. Several students shared

their favorite parts when the class was finished with their work.

A required reading test was administered throughout the week to check on

comprehension. The teacher spent time explaining the procedures and reading the

questions and answers to the students because it was the first one. At the end of the first

testing session, she read the story aloud and discussed each answer with students "kissing

their brains" if they were right and correcting answers if they were wrong. A discussion on each answer highlighted why one was better than the others. During the rest of the sessions the students worked independently with the teacher offering assistance only with the title, an advertisement inserted in the story, and a few proper nouns as well as the procedures to use while completing the test. Students had privacy folders to put up around their work areas to ensure independent work.

Spelling followed the reading test and since it was a review week all of their words were already on the Word wall. The teacher used a guessing game to review the words giving clues to a word and having students find it and spell it to a partner. She used this as a chance to review spelling rules for vowels and led in the singing of the Short Vowel Rock for added review. Other activities during the week for spelling included partner spelling, writing the words on individual whiteboards, listing word families and sharing them with partners and class, adding suffixes to the words, and a worksheet on which students traced words in different colors depending upon the vowel sound in them. Each student had a set of word cards to take home to study for the test.

Center time followed spelling and since the centers changed weekly, began with an explanation of each one. Students rotated through the centers completing all of them by the end of a week. Centers included art, reading directions and using new vocabulary words to create a tree, library where students read reading Accelerated Reader books, science with posters about seeds and identification of samples, math with a guessing jar and a patterning activity, and listening to a tape of a book they read last week. Students were assigned to centers and transitioned quickly and fairly quietly to their work. Each day the students met with the teacher after centers to discuss any specific problems with

each center and centers in general. Comments ranged from the listening center needed another book to we had all the materials we needed to too much noise. Solutions were developed for each problem and new ones were discussed the following days with new solutions if necessary.

At the conclusion of the center discussion it was time for their special class (art, music, physical education, and library) followed by lunch and recess. The teacher reviewed the procedures for each one prior to students leaving the room.

Math procedures and instruction. Upon return from their break students sat on the carpet for calendar activities which included the day of the week, date, and how many days in school. The first day of observation was the 26th day of school and students were to find different ways to write 26. Answers ranged from $25 + 1$ to $2 \times 10 + 9 - 3$ to twenty-six as well as several others. Each day students were asked for a variety of ways to write the day and students became more creative with their answers. Looking for a pattern in the calendar, which consisted of transparent, colored shapes on each day, followed this activity. Yesterday, today, and tomorrow along with the days of the week were also reviewed each day.

Subsequently the teacher asked the students how they could figure out how many students were in the class without counting them. Students gave several suggestions before returning to their seats where the teacher explained she was going to demonstrate two of the ideas. She modeled two ways of doing it, one using the tables and one using girls and boys and then asked if one box of 12 pencils would be enough for everyone. She continued with questions about pencils and a bag of cubes encouraging students to determine ways to decide if there were enough for everyone. Students then worked with

cubes to demonstrate ways to show enough for everyone without actually counting each student. Students used pictures and charts as well as the cubes to solve this problem. They worked cooperatively on this as a table group helping each other figure out the answers then wrote about the process in their math journals.

On the following days students worked on math facts using flash cards as a large group with the teacher and with a partner. The teacher referred to the strategies they had covered and reminded students to use them. These included doubles, doubles plus one, and touch points. When they finished each day she asked what they should do if they were not very good at it and the students responded with practice, practice, practice. Later in the week the students completed a speed test on their facts; this was a paper of 50 facts they were to complete in two and a half minutes. Many students successfully completed the test while others needed more time. Students kept track of their progress on a graph and most have shown improvement over time. Students worked on problem solving with pages from their math book and counters, but with most of the work being done as a large group, students did not seem to use counters. At the end of the week they did an activity with counting coins and pockets and graphing their results.

Complementary activities. On two of the observation days students went to the computer lab following math to work on math and language activities. The other days were spent in Writers' Workshop. Students were given a specific assignment and reminded that it was an independent work time and that sharing would be done later. Students were working on a variety of stories from previous days as well as specific skills such as subjects and predicates put together to make a command. While students worked the teacher roamed the room asking questions about punctuation and capitalization and

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answering student questions. After several students asked about spelling she reminded

them they were to look in their little dictionaries, chunk it, ask a partner, or check the

word wall. Their journals had a place for words to be added that students thought they

would want to use in their future writing. The teacher gave a variety of help to students

ranging from giving the students a word by writing it in their journals for them to copy to

pointing out a resource where the student could find the word. After working

independently for a time students shared their writing with others at their tables and then

with the large group at the carpeted area; they followed a sharing schedule so that all

students had a chance to share. This sharing was done with an author's chair decorated

for this special purpose. After the students shared a selected writing others were

encouraged to comment, ask questions, or provide suggestions.

After computer lab or writing students had a variety of activities depending upon the

day. One day the guidance counselor came in to talk with them about drug use and

abuse, one day was a class discussion on behavior during recess, one day was an art

activity related to their fables, and one day was spent looking through their science books

at pictures of living and nonliving things and discussing into which category things fit.

Closing routine. The Daily News followed these activities with all students on the

carpeted area to talk about the day's events. During this time one student served as the

reporter while the teacher was the recorder. When the student had difficulty with the

events of the day the teacher and other students helped. The teacher wrote the news

without assistance from the students on format or grammar. This time was also used for

summarizing the day's events. Each day concluded with free choice activities for

students who had their work completed and had no behavioral referrals. These activities

included games, blocks, art, and center activities from the day. Students cleaned up and prepared for their buses at the end of the day.

   Observer comments. This second classroom also provided evidence of the 13 best practices identified by Zemelman, Daniels, and Hyde (1998). This was a student-centered classroom with hands-on activities evident each day in math, literacy centers, and free choice interests. The literacy centers were also an example of the integration of subjects with activities on art, science, and math as well as reading and had an emphasis on authentic learning.

   Students were exposed to a variety of forms of expression including reading, drama, art, and writing and were encouraged to share their work with others in the class. Interaction among the students was encouraged and there was a sense of collaboration and cooperation more than competition in their work. All students were expected to work to the best of their ability with each one being responsible for his or her homework, folders, clean-up, having their materials, and making good choices about his or her behavior.

   The class reflected each day on the center activities, which are examples of the students' involvement in their learning and the high level of student engagement in this classroom. Indicative of the challenging environment were the questions the teacher presents to the students throughout their learning experiences. Although the teacher had high expectations for each child she addressed their individual needs through differentiation and developmentally appropriate assignments. See Appendix I for a transcript of the interview.

National Board Certified Teacher Number Three

   Setting. Observation three transported me to a rural area where the school was

surrounded by farms and coalmines. The school was about 12 years old and was the

result of a consolidation of six small schools. Each of these schools was still represented

by decorations in the hallways. The building was large and colorful with a welcoming

entranceway. Signs directed visitors to the office and one of the teachers took me to the

classroom since the halls went off from the main one like spokes in a wheel. The walls

of the school were decorated with student work and newspaper articles about the school's

events. Tables are in the hall which I soon discovered were for parent volunteers to use

while working with students or doing paperwork for the teachers.

   NBCT Three's classroom was the last room at the end of the hall and she was in

there preparing for her day. The room was larger than the first two I visited and had an

abundance of storage space for students and the teacher. One section of the room near

the sink had a tile floor while the rest was carpeted. A large area in the back of the room

was set aside for a reading area with baskets of books on the floor and with books on the

shelves. Another section of the room had a rug for use during calendar activities and read

aloud. The student desks were arranged as tables with other tables in the room for center

activities. The walls are covered with materials such as posters for word families, a lost

tooth graph, colors and color words, number words with pictures and numbers and a

number line labeled with positive and negative numbers. The area around the rug had a

calendar with patterning, sticks for bundling as they count the days of school and a

hundreds chart colored for even and odd numbers. Other posters included the children's

names, a text-to-self connection reminder when reading, word wall words, a pumpkin

with ideas to write about, good traits of writing, and the alphabet. Posted on the board were sentences for each child using his or her name in an alliteration and student interviews done by other students. Rules for small group work were posted near the class promise about behavior. Stars hung from the ceiling emphasizing good manners such as thank you, yes ma'am, and please. The teacher's desk was out of the way and was where I sat during the observations. The classroom reflected a busy atmosphere where it appeared work and cooperation were valued.

   Morning routine. Once again, the routine of the four days was firmly established so the description of the observation is a composite of the four days. As students entered the room they put away their belongings and opened folders on their desks to be checked and emptied by the teacher. They were reminded to go to breakfast, sharpen pencils and prepare for the day. This preparation included reading a morning message posted on an easel near the door. Each day, students were expected to read the message and follow the directions which included cleaning out desks, reading, playing a game with coins to practice counting, and using counters to illustrate numbers. Three students worked on the computer each morning according to a posted schedule.

   During this time students put a stick in a jar indicating hot or cold lunch. One student was responsible for changing the calendar day and another indicated the weather on a chart near the calendar. While students were busy with these activities the teacher collected papers from folders, replaced reading logs that were filled, and listed students who needed to complete work during recess. Two students from the upper grades came into the room during this time to help the first graders get organized for the day, complete the morning message activities, or run errands for the teacher. When music began

students cleaned up and returned to their seats and the older students returned to their rooms. The morning announcements and Pledge of Allegiance marked the official beginning of the day.

Following the announcements one student went to the lunch count area and had three post-it notes. He had written the number of students present on one, the number absent on one and the total number of students in the class on one. He gave them to the teacher and read them aloud and explained what each meant. He then counted the number of sticks in the cold lunch jar and compared that to the number of cold lunches on the table. Based upon his responses the teacher had all students place their fingers on the number 18 on their number lines and asked them why. Students answered, "because there are 18 of us." She had them count back three because there were three cold lunches and asked how many were there for hot lunch. Students lined up for a bathroom break after this.

Upon return music was playing and students used this as a cue to go to the rug area around the calendar where they completed the morning opening. This began with one student graphing her lost tooth on the chart and a discussion on how many teeth had been lost each month so far and a comparison of the numbers. The teacher also asked if they could lose any more in the previous months or in the present month. Following this discussion attention turned to the calendar activities. These consisted of naming the day of the week, the date, and determining the number of days in school. Students also determined whether it was an odd or even number and then the teacher used the hundreds chart to have students count by twos, fives and 10s. Students also used sticks to track the days in school, bundling them into groups of 10 when appropriate. The teacher used each of these opportunities as a time to ask for explanations of why and how students were

doing these activities. Music is used throughout the day to signal transitions. Different songs have different meanings to the students and they move from activity to activity with little prompting other than the music.

   Language procedures and instruction. The teacher introduced a read-aloud story to the class after reviewing the story from the previous day. Following the reading the teacher asked students to make connections between the two stories and talk to a partner about those connections. Later they shared with the whole group. A similar activity took place later in the week with students making a T-chart to compare two books. Similarities were done in a large group while differences were done independently or in small groups.

   Following the whole group instruction students were sent to various centers for reading group activities. One group went to the teacher while others went to the Title I teacher, another first grade teacher (who sent some of hers to this class), to the reading baskets, spelling word activities, or a follow-up activity to the morning's read-aloud. During the reading group all students wrote in a personal journal about their reading story. All students have a reading bag that contains several assigned books, word wall words, word family words, and a journal. Students rotated among these activities throughout the reading block of time.

   Each day a different activity followed reading. These included a spelling test, large group work with word families, both as a review and an introduction of a new one, phonemic awareness activities, and a presentation on Christopher Columbus.

   Writers' Workshop followed recess. Students wrote stories in small teacher made books and illustrated their stories. Both the regular teacher and the Title I teacher

assisted students with editing as they wrote. Students were expected to spell all word wall words correctly and to use classroom resources for spelling aids, not just ask a teacher for the spelling. Prior to writing the teacher reviewed the correct procedures used by good writers. Students had individual dictionaries they were encouraged to use for assistance as they wrote. At the end of this time students put all of their writing into their folders and one group shared what they had done. Sharing is done on a rotating basis dependent upon the color of their folders. During sharing time students reviewed each other's writing by indicating with thumb-up or down whether they had stayed on topic, used proper punctuation and spacing, and if the pictures went with the story.

Math procedures and instruction. Much of the math instruction is tied to the opening exercises dealing with the calendar, the days of school, and the morning message activities. However, direct instruction also had a place in the classroom. Each day was a different activity with one day using calculators to demonstrate how they could count by twos, threes, or other numbers easily. After the teacher modeled the process, each child received a calculator and practiced adding. Children were allowed some "playtime" making up their own problems and solving them after completing the assigned problems. One day the teacher and students made up math stories and then solved the problems together. Students gave information needed for the problem as well as for the solutions. The teacher wrote the problems on the board using numbers and pictures to help with the solutions. Another day the activity involved counting objects. The teacher led students in a discussion about using a variety of objects to count. Students generated ideas on what they could use which led to the teacher introducing the idea of using units to count. Students were given a variety of units to use and cards with numbers on them. They were

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given partners and went to different places in the room to count objects. On the last day

of the observation the students began a unit on telling time to the hour. They each had a

clock that they set following the teacher's model and then on their own. Students were

given the opportunity to pick a time and show others what time it was. The teacher

concluded this lesson by putting the present time up and asking students what time it was

and what it meant. Students recognized it as lunchtime and they lined up for lunch and

recess.

Complementary activities. Students went to the computer lab on three days. They

worked on Compass which is a leveled program of math and language activities and

accessed a website called Starfall which allowed them to do a variety of language

activities. One day, as a whole group activity, students viewed an interactive story

choosing objects to direct the story's flow.

Closing routine. As the day came to a close students followed a daily routine.

Papers that were to go home to parents were found in their individual mailboxes and table

groups were called to get them while other table groups went to the closets for their coats

and book bags. Then the groups changed. All papers for homework went into one side

of the folders and papers to stay home went into the other side and then folders went into

their bags. When all desks were cleaned up and students seated they lined up for their

special classes, which consisted of library, music, art and physical education. They left

for home immediately following these classes.

Observer comments. Evidence of the 13 best practices identified by Zemelman,

Daniels, and Hyde (1998) was present in this classroom. Both the classroom

arrangement and the activities provided evidence of a student-centered class with

opportunities for engagement and creativity throughout the day. The teacher had high

expectations for her students while she differentiated their instruction to meet their needs

and created appropriate and challenging activities for each of them. Students had a great

deal of responsibility for their belongings, their actions, and following classroom

routines. They were expected to be mannerly in their interactions with adults and peers

alike.

The students chose books to read, activities to do, and subjects to write about in their

journals. They were involved in authentic experiences in both language and math and

were expected to make individual and group connections between learned information

and the world around them. Students reflected through discussions and journal writing

on a daily basis. This classroom modeled the ideas of learning as a social experience

with opportunities available to students to express themselves in writing, speaking,

artwork, and play. See Appendix J for a transcript of the interview.

National Board Certified Teacher Number Four

Setting. Observation four was at a small school in a rural area a short distance from

a city. The building was older and had been expanded over the years due to a growing

population so rooms were not arranged in an organized pattern. Upon entering the

building the office was in an open area directly in front where I was greeted warmly and

taken directly to the classroom. On the way I passed student artwork on the walls as well

as murals done in previous years. To get to this teacher's classroom I passed through the

physical education area and up stairs to what appeared to be an addition to the building.

Only two classrooms were in this area which was located above the cafeteria.

The teacher welcomed me to her room and began to prepare for her day. The room was full of materials, tables, desks, with much of the wall space covered with posters and charts. These included touch point numbers, number words with pictures and numbers, a number line; hundreds chart, alphabet, maps of the United States and the world, vowel sounds with pictures, and color words with a paint streak of color. Students' pictures and birthdates were posted along with class rules, station groups and assignments, a Dr. Seuss alphabet, the calendar and weather charts, and left and right signs. Windows lined one wall with blinds drawn halfway and used for word wall words. One area of the room had shelves filled with books, blocks, and various other activities for the children. Computers and a listening center were in the corner and a table was set up with a large jigsaw puzzle that students worked on throughout the week.

With the teacher's desk placed out of the main flow of the activities, the room sets the tone for child-centered activities. Most of the floor space was covered with rugs, which were used throughout the day for large and small group meetings. There appeared to be an atmosphere of learning and fun in the room.

Morning routine. There was an established routine to the day in this classroom so the four days were treated as a composite rather than independently. Students entered the room in an organized fashion but excited to share their experiences from home. They hung up their coats and bags while sharing stories. The teacher reminded them of breakfast, pencil sharpening, and folders. On Monday morning students found their folders on their desks with work from the previous week in it. On the other days students brought their folders in and they were returned later in the day.

A bell ringer activity was posted on the board and students began working or went to breakfast. When students returned from breakfast they completed the bell ringer. When finished, they were allowed to play on the carpeted area with blocks and games until a two minute warning announcement from the office. Students cleaned up and were in their seats for the opening announcements and the Pledge of Allegiance.

The teacher took lunch count by a raise of hands for packed lunches then asked for all eyes forward. The teacher chose a student to help with calendar activities, which included yesterday, today, and tomorrow, the day's date and day of the week, and the weather. This activity provided opportunities for questions about what day comes before or after, weather predictions and a review of the schedule for the day.

Language procedures and instruction. At this time students took out their bell ringer activities while the teacher led a discussion, asking for information such as what did all of the words have in common or what clues students used to decode a word. Questions required students to reflect on their thought processes and not just give yes or no answers. Following the discussion the teacher checked to see that papers were finished with students placing them in the appropriate colored folder (finished work or work to be finished).

Whole group phonics and phonemic awareness followed. Each day the teacher drew a large picture on the board and asked for words with the same beginning or ending sound as the picture. These words were written in the picture with students spelling them and keeping track of how many more were needed to reach 10 words. When students made an error in spelling rather than correct it the teacher asked questions such as what other way could you spell that or sounded it out in syllables to help. If a word could not

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be spelled correctly by students, the teacher used a dictionary talking through the procedure she used to find the word. When all words were written students came up and said the word and marked it according to the number of sounds each had. The students completed a worksheet on the sound as follow-up with the teacher giving hints about endings and letter formation as they worked. Students placed their papers in the appropriate folder and took out their reading books.

The teacher led students in a preview of their story using a picture walk. Some of the students tried to read as they looked at the pictures. When all students were finished looking through the story they went to a carpeted area to listen to the story on tape. The story was about fish and it led to a discussion on experiences with fish. This same story was used later in the week for partner reading and bump-reading where students each read until the teacher said bump and named another student. During bump-reading the teacher interrupted to ask questions such as why something happened or "what do you think would happen if?" A student question about a question mark, which turned out to be an exclamation point turned into a discussion on statements, questions, and exclamations and why each is used in a story. Follow-up activities included workbook pages done with a partner, writing a fish story, and discussions about fact, fiction and types of fish.

The Title One teacher joined the class so two groups were formed to complete some of the follow-up activities as well as other skill building activities. The teacher's group worked on creating sentences out of groups of words including how the same words can be rearranged to make different sentences with different meanings.

Journal writing followed reading. Some students wrote about their reading stories while others chose different topics. During this time the teacher roamed the room asking questions, offering assistance, and commenting on their writing. She addressed each student as they wrote directing them to a variety of resources for help in spelling or words to use. Students were given the opportunity to share their writing at the end of the writing period. The teacher reminded students about what good listeners looked and sounded like before the sharing began.

Following sharing, students had a bathroom and drink break and time to work with a partner using any of the building blocks available on the shelves. The teacher explained, "I always knew the students needed some down time, but it wasn't until the NBPTS standards that I understood why and could justify the class time". Despite groans, students cleaned up quickly and quietly when the teacher signaled time was up.

Math procedures and instruction. Math activities varied each day beginning with story problems and cubes. Each student had a set of cubes and was given a minute or two to play with them. The teacher referred to them as toys during this time and then they became tools. Students gave the teacher subjects for word problems and the teacher made up simple addition and subtraction problems using their ideas. Students solved the problems showing their work with the cubes on their desks. The teacher assisted students who required help in showing the solution with their cubes.

This activity led to a discussion about the different strategies for problem-solving they had learned. The students listed several including making up a story, using dominoes, cubes, or counters, using a number line or touch points, memorizing, doubles and doubles plus one, and putting the big number in your head and counting forward or

backward. After listing these strategies and reviewing how to use them, the teacher

directed students to a page in their math books on story problems. Students worked on

the problems individually but with conversations among table groups.

Upon completion of this task, the teacher asked for their help in dividing the class

into two equal groups. Since they are grouped as tables several students suggested using

the tables as a method. The teacher led their thinking by asking questions and helping

them figure out numbers, but the students came up with the solution in the end. The

groups were used later for a spelling contest as a review of their words.

Three days of math were devoted to related math facts or families. Students were

given cubes to use as they demonstrated specific facts that belong to a family of facts; for

example: 6+3=9, 3+6=9, 9–3=6, and 9–6=3. The teacher and students discussed the

number of facts in a family, ways to remember what the related facts are, and how to

generate three more facts if you have one fact. Activities included writing them on paper,

demonstrating them with cubes, and a worksheet that involved putting the correct facts

into related facts houses.

Complementary activities. Following lunch students participated in Drop

Everything and Read, using self-selected books and scattering around the room to read.

While they were reading the teacher set up stations for later use. A timer marked the end

of the session and students put away their books and returned to their seats.

The teacher called each group to the carpeted area and reviewed some of the stories

students had turned in last week. She indicated a few problems with punctuation and

capitalization and used a student's paper as an example of how one should look.

Following this the teacher introduced the stations the children would be using today.

Students rotated through each one on a daily basis and all but one was related to their *Writing to Read* word of the day. This is a program that uses the computer, worksheets and activities to teach a word each day encouraging students to use these words in their writing. The unrelated station varied from day to day and was usually an art activity or puzzle.

When the stations were finished and materials put away the teacher asked the students to join her on the carpet for activities concerning character and special events. Gratitude was the topic for this month along with reviewing knowledge and determination from previous months. The teacher also used this time to introduce Veteran's Day. Students learned about the significance of the day and then created posters for the Army, Navy, Air Force and Marines to be taken to the Veteran's Hospital near the school. This was a group project that required them to learn about each branch of service and design a poster with pictures and words that were descriptive of the branch they chose. Students were allowed to design them in any way they chose as long as there was consensus and everyone had an opportunity to contribute. The groups worked very quietly and appeared very involved in this project.

Closing routine. Students ended each day with one of their special classes, art, music, physical education, and library or computer lab. When they returned from these classes they retrieved their book bags and coats and packed up their folders and work they had to do that evening. When they had cleaned up the area around their desks and were ready to leave the teacher read to them until the buses were called.

Observer comments. Once again the 13 best practices of Zemelman, Daniels, and Hyde (1998) were in evidence in the classroom. For the majority of the day students

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were engaged in learning through hands-on activities, discussions, and group work. Authentic learning was evident in projects like the Veteran's Day posters and the need for reading in their daily lives. The teacher stressed cooperation and consensus among group members and gave students a variety of opportunities and ways to express themselves. Respect and responsibility were integrated into most activities and played a major role in this class.

This teacher offered challenges to students while ensuring that their needs were met through age appropriate activities and scaffolding her assistance to them. Students were given many opportunities during the day for making choices, directing their own learning, and interacting with their peers. See Appendix K for a transcript of the interview.

National Board Certified Teacher Number Five

Setting. The fifth observation on this journey took me to a very old school located in the downtown area of a small city. It was located on a narrow side street surrounded by houses with an institution for higher learning a block away. The school actually consisted of four separate buildings. Upon entering the main building I was greeted with displays of school pride and a sign indicating the location of the office. After signing in at the office I was led by one of the teachers to the classroom, which was located behind the main building. The halls of this building were decorated with student work and announcements concerning events at the school.

The classroom was located at the end of the hall and I was welcomed by the teacher who was preparing for the day. The room was average in size and was filled with materials, tables, desks, and activities for children with the teacher's desk tucked back

into a corner out of sight from most of the room. Two eye-catching items in the room were the bunk bed along the wall used as a reading loft by the students and the old fashioned bathtub filled with cushions underneath it also used for reading. There were four carpeted areas in the room, two smaller ones by the bookshelves and two larger ones used for whole group work. The room was decorated with posters and charts providing a wealth of resources for the students. These included the alphabet with letter formation emphasized, a number line, word wall words, word family charts, a daily schedule, classroom rules, days of the week, and the Pledge of Allegiance. Students' names were listed alphabetically and used for tracking the classroom helpers. Student work is hung on the walls along with a chart marking gold and green slips for behavior. On the back wall is a poster size book written and illustrated by the students. Mountain Math and calendar activities had prominent places on the boards around the room as did charts on counting by twos, fives, 10s, 100s and even and odd numbers.

The large amount of materials easily accessible to students, the arrangement of the room, and the carpets and reading areas were evidence that this room appeared to be for students to use for learning and enjoyment.

Morning routine. As students entered the room they turned in their folders, put their name cards in a hot/cold pocket chart for lunch, and put a colored cube into a basket (color coded for girls and boys). They hung up their coats and book bags in the hall with cold lunches left on the shelf above. A poster on the wall listed questions children should ask themselves to see if they were prepared for the day.

There was a morning message on the easel at the front of the room which children read and signed their names to. The morning message had their spelling assignment and

may also contain other information for the students. Sometimes it contained mistakes that students were encouraged to correct. A closed circuit television was on until after the announcements and Pledge of Allegiance were concluded.

Students worked on their spelling which was done individually with help from others as they worked. During this time the teacher completed the lunch count from the chart, reminded students of their morning chores, and helped with spelling questions. Students who finished their spelling were allowed to go to other tables to offer assistance.

The teacher called students to the floor in the front of the room for the morning opening which consisted of various calendar and counting activities. First, they reviewed their classroom rules by having each student state which one he or she thought was the most important one. Then they moved on to keeping track of the number of days they had been in school this year. This was done with sticks that were bundled in groups of 10. The helper was responsible for the sticks, but others helped determine the number. The helper put up the date and a tally mark for the day and then used the pointer and calendar to count the days in the month forward and backward. Cards for yesterday, today and tomorrow were moved and the balloon used to mark yesterday was broken. The helper blew up today's balloon counting the number of puffs and writing it on the balloon and then chose a balloon for tomorrow. Each of the balloons was hung under the appropriate day. The teacher held up today's balloon and asked if it was transparent or translucent and when students answered they had to decide why.

The teacher used the lunch graph to help students create a problem using the number of students in the class as the total and the number of hot and cold lunches as the addends. The students used the cubes in the basket to determine if the answer was

correct. When a student was absent they added another dimension to the problem solving process. The weather was recorded on their weather graph and the helper chose whether the class would count by twos, fives, or 10s. The opening ended with a song.

Language procedures and instruction. Students joined the teacher on the carpet area with their whiteboards and markers. After giving gold tickets to students who signed the message board, the teacher and students read the morning message in unison with students taking the lead. The teacher introduced an activity each day that used the message in a game format. These included erasing specific words the teacher said, erasing any word they chose after reading it, and finding mistakes in the message. The teacher used this opportunity to discuss how mistakes helped us learn and that everyone made mistakes and that was okay.

Following this they listened to a phonemic awareness tape of the alphabet sounds with teacher and students writing the letters on their whiteboards along with the song. Many of the students joined in singing with the tape as they wrote.   Next they used their spelling words and word wall words to make new words by changing one letter at a time. They sang along with the tape, *I Can Make New Words* as they did this.

Students put away their whiteboards and took out magnetic mats and letters and joined the teacher and the Title I teacher back on the carpet. Before using the boards the teacher reviewed the day's agenda written on the board. Then students placed their letters on their mats in alphabetical order. This moved fairly quickly except for a few slower students. The Title I teacher helped her group with the process and the teacher helped others who were slow in doing it. They were encouraged to help one another also. As the teacher called out letters to move to the bottom of their mats, she wrote the letters

on her board and then asked what the words were. They made several words from a specific group of letters and then tried to make a mystery word using all of the letters. When they were finished they put everything away and the teacher gave them a worksheet with the letters to take home and practice the games with their families.

Students returned to the carpet area for an activity song such as *Tooty-tah* and then settled back down for further instruction. Activities during this time varied from day to day with a Writers' Workshop on the first day. The teacher used a student's paper as an example to show some errors that were made in the writing. Students found the errors and discussed how to correct them and the teacher reminded students to use punctuation and finger spacing as they wrote. After introducing a story on spiders the teacher led a discussion on fact and fiction. Later when they had heard the story, students decided it was fiction because the spider talked. The teacher put a piece of student writing paper on the board and talked about the process she used to begin writing. As she wrote she sounded out words, and used the strategies she wanted the students to use in their writing. After modeling the process she sent the students to their desks to write their own poems or stories about spiders or complete something that was in their writing folders. Students were to write and illustrate so a timer indicated when to change to ensure both jobs were completed. As students wrote, the teacher assisted with spelling writing the word for some and sounding it out for others. Each child had a dictionary where many put their new words for future reference. Several students shared their stories before lunch.

The next day the teacher introduced a poem on spiders and spent time explaining the differences between a poem and a story. The students and teacher found the patterns in the poem and looked for rhyming words. Following this the teacher introduced centers or

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work groups. She described each center and explained how to read the schedule. After reviewing the procedures she sent students to their assigned centers and called a reading group to a corner of the room. Students rotated through centers as the teacher worked with different groups. During reading groups the teacher emphasized her love of reading as well as the fact that different people learned to read at different rates just like they learned to run or talk or walk at different rates.

At the end of center time students were to go to the carpet area where the teacher introduced the book, *Itsy, Bitsy Spider*. After reading the story the students sang the words using hand motions and then returned to their desks for a writing activity based on the story and song. They followed the same format as on the previous days with Writers' Workshop. While students wrote the teacher helped with ideas, punctuation problems, and spelling. She helped one student understand that everyone has writer's block sometimes and not to worry about it today, tomorrow is a new day.

Math procedures and instruction. After lunch, recess, and their special classes students sat on the carpet in preparation for math. The teacher explained to students that they would be working on different activities dealing with patterns during math. Each station incorporated an activity they had practiced so after a quick review of the expectations for each one, students were sent to work. The activities included creating patterns with crayons on a predesigned sheet of paper, creating patterns with stickers, creating patterns with buttons, creating and copying patterns with cubes and blocks, and looking at the exhibits of pattern samples that students had brought from home. When time was up and things were put away the teacher met with students to discuss and share some of the patterns they created. Every student had the opportunity to share one thing

and to identify their pattern using letters, e.g. ABBA. Most of the examples were added to the exhibit area and many were later displayed in the room.

One day the teacher introduced a new topic with bags of counters on each child's desk when students returned to the room. On the board was a message: Collect 15 together. One student asked what it said, but the teacher turned it back to them to figure it out. When they did she explained what it meant and introduced a new game for them. They were to work with a partner, roll the die to determine the number of items to collect and the first one to get to 15 won the game. They were to develop their own strategy to keep track of the score. There were a variety of activities using counters set up around the room which students rotated through, practicing their counting and addition skills.

Closing routine. When time was over math activities were put away and students went to the carpet with pencils, folders, and homework sheets. After a quick discussion about math centers the teacher reviewed the homework for the day and showed them each item that they should have in their folders. When all children had their belongings organized they prepared for a recess and snack break.

Upon returning to the room students prepared to go home. While waiting for the buses to be called the teacher read to the students or allowed them to read silently.

Observer comments. In this classroom there was evidence of all 13 practices identified by Zemelman, Daniels and Hyde (1998) as the best. Students were given choices concerning their behavior, writing topics, books to read, and which songs to sing. The teacher gave assistance to all students, but differentiated the level according to need. A variety of activities available kept students focused while providing them opportunities

to socialize, engage in their learning, and express themselves in a number of ways including singing, drawing, writing, and speaking.

Students in this class were encouraged to collaborate with table mates and offer assistance to peers who ask for it. They were also given the opportunity to reflect upon their mistakes as well as their successes both in and out of the classroom. The teacher created an atmosphere that reflected the importance of their work providing them with challenges that required thinking while addressing their interests and abilities. The teacher provided activities that reflected the world around them and demonstrated that learning was not only done in schools. See Appendix L for a transcript of the interview.

Non-Board Certified Teacher Number One

Setting. Observation six took me to an older school located off the main road near a small town. It sat on a hill and was away from other buildings so appeared isolated. As I pulled into the parking lot I noticed a gentleman greeting each car and bus as they pulled up to let children off at the building. It turned out he was a teacher and this was his role each morning. Although he was alone that day he was often accompanied by the principal as each child was welcomed to school each day.

Entering the school it seemed like I was going in the back door, but once inside there were signs directing visitors to the office. After winding my way down a couple of halls I came to the office and received directions for the classroom. Although the building appeared quite old the hallways were brightly decorated with student work and posters. One of the teachers led me to the room I was looking for and introduced me to the teacher who was in the room preparing for the day.

The classroom was average in size with wooden floors, windows along one wall and closets and storage cabinets set into the wall along the opposite side. Along the back wall were lockers for the students' belongings also set into the wall so they were flush with the walls around them. Student desks were grouped as tables of five with one desk set apart near the teacher's desk which was at the front of the room. Computers for teacher and student use were located in the front near the teacher's desk along with a rocking chair. A table near the back of the room was set up for reading groups. The focus of the room appeared to be the front where the teacher's desk is located.

The room was filled with posters and charts for the children to use as resources. These included word wall words, a chart of writing topics, reading strategies, a calendar, spelling strategies, class rules, Pledge of Allegiance, color words on crayons, a United States map, the alphabet in manuscript and cursive, shapes, coins, an editing checklist, and comprehension strategies. Posted on a bulletin board were the week's word wall words with a chart listing strategies for learning them. These words move to the word wall at the end of the week. The room also had a television and overhead projector. Bookshelves were filled with textbooks, library books and art supplies.

Morning routine. The teacher was sitting at her desk as the students came into the room. She greeted them and reminded them to put up their book bags, turn in their homework and sharpen pencils so they were ready for the day. Students found worksheets on their desks with numbers from 400 – 500 with blanks to fill in between. The teacher reminded them they had done this before together and even though the Content Standards and Objectives say to only go to 100 she thought they should know to 500. She gave two reminders about their names on the papers while they worked.

After the office announcements the teacher did lunch count by calling each student's name and listening for his or her response. She then called students up individually for stickers earned for turning in their homework. Students put these on a chart on their lockers and kept track of them for rewards. The student helper handed out papers while she gave out the stickers and issued a final bathroom, drinks, and sharpened pencils reminder. As students finished their math paper they took it to the teacher and returned to read, color, or talk until the timer signaled time was up and everything was put away.

The helper went to the front of the room to help with the calendar activities. The teacher said it was day 16 and the helper puts a straw in the ones cup and told why he put it there and not in the 10s cup. They counted the months to determine that September was the ninth month and then everyone repeated the date.

The teacher moved to a chart showing the word SOLVE and asked what it meant to solve a problem. She reviewed the SOLVE process used for math problems and read a couple math problems after which students tried to determine what the problem was asking. Each day they discussed the SOLVE process and completed math problems focusing in on different aspects needed to solve problems. The teacher sometimes modeled the process before asking the students to do it. This was all done as a whole group activity.

Language procedures and instruction. The teacher called the class' attention to words written on the board behind her desk. They read the words in unison and then discussed those with endings such as –es, -ing, and –ed. She asked students what each ending referred to and circled the endings in the words. After reading from their reading book, they referred back to these words and discussed the importance of apostrophes to

show possession and listed some pronouns that also indicated possession. Each student

received a list of these words to study for a test in two days. There was no further

mention of the words until they were tested individually by reading each word aloud to

the teacher. The following day a new list of words was on the board for them to study.

Students read from their reading books orally taking turns between boys and girls

when signaled by the ringing of a bell. There was no introduction to the story they

simply began reading on the first page. When they finished reading they put their books

away with no further discussion. The next day they read the story again taking turns with

the teacher as she read one page and the students read one page. Again there was no

discussion about the story. After skipping a day they read the story once more. This time

the teacher reminded them to touch each word and when finished they closed their books

and discussed the meaning of a summary. She asked them to give her a five-finger retell

of the story elements, but then said four was enough eliminating the events of the story.

Students called out the answers as she named the parts and then they put their books

away and took a stretch break by playing Simon Says.

Following their break the students and teacher discussed what makes a sentence and

the two parts of a sentence. The teacher used the charts of naming words and action

words to help with the discussion and students began making short sentences using the

words on the charts. Next students completed a worksheet identifying nouns and verbs in

each sentence. Although she reviewed the reading strategies students should use to read

these sentences most of the work was completed as a group. Later in the week the

teacher and students reviewed describing words listed on a chart. The chart and five

senses were used for examples of words to use. Then students completed a paper

independently after the directions and sentences were read to them. When they had finished students waited in line for the teacher to check each paper.

The following day they came to the front of the room and sat on the floor to discuss the job of an editor using the editing checklist as a reference. The teacher told students they would act as her editors as she wrote and they reviewed the different marks an editor would use. As she wrote the students helped spell words and found mistakes in punctuation. When the news for the day was finished they read it together and students returned to their seats. They wrote their class news another day, but it was totally written by students that day. The class helped with editing as they had done with the teacher.

This was their first week for reading groups and to help introduce it the teacher only took one group each day. Before beginning she reminded students they were not to bother her and gave them several options for work during this time. These options included art, working with letters, hot dots (a quiz game), flash cards, or reading a book. Most students chose the art center. When the noise level rose too high they had to put the art things and games away and just read or write.

Spelling followed guided reading each day. The words had been introduced previously so students were familiar with them. Each day they worked with them putting configuration boxes around them, doing a rap and clap session with them, practicing by writing them, and tracing them. This was followed by a test on the words at the end of the week. Several of the words were marked with a dot that the teacher explained meant they could use them to create other words. They did several examples using am, at, and it.

Math procedures and instruction. Each day in math the teacher used a different strategy and covered a different topic. She began having students line up and asked questions about who was first in line, who was third and continued with several examples. Each time she would put her hand on students' heads to count and check answers. Students went back to their seats and the teacher put several ordinal numbers on the board and compared them to grade levels. Following this students received a worksheet on ordinal numbers and one with a hundreds chart to complete. Students went to the teacher's desk for help as they worked, but were not to help each other and were expected to work quietly and read when finished. Unfinished work was assigned for homework.

The following day math consisted of a chant of basic facts, then a review of ordinal numbers with a line of girls only. The teacher took the lead in counting positions. When everyone returned to their seats the teacher explained the worksheet on ordinal numbers and students completed it quickly and turned it in to the teacher. After a quick whole class review of counting forward and back from one to 20 and 20 to one another worksheet was completed on this skill. The teacher explained these were checks for the Informal Math Assessment.

On the next day students were given a timed test on their basic addition facts. The teacher explained they would do it every week until all students attained 100% on it for two consecutive weeks. When the papers were collected the teacher had students write addition problems on the board while the rest of the class checked them for correctness. After a few examples all students returned to their seats to complete a workbook page on addition and subtraction facts. The end of the page had story problems which were

completed after an explanation by the teacher. She did this by writing one on the board and asking students what the actual question was and then demonstrated how they should go about solving the problem. She modeled her thinking process as she solved it and then worked through two of the problems from their page with the students. Students were expected to complete the page without further assistance from each other and were given the option of using counters if they needed the support.

The last day consisted of a review of math facts, terminology used in addition including horizontal and vertical, addends, and sum, and the significance of the term altogether when used in a story problem. She used a picture to illustrate solving a word problem and wrote a number sentence for the problem. Students took out a math page and the teacher explained the directions for each section as students completed them independently. When completed they took their papers to the teacher at her desk to be checked; students with correct papers returned to their desks to "find something to do" until everyone was finished.

Complementary activities. Although no specific activities occurred that fit this category each day students used the time between teacher directed procedures for drawing, reading, and talking. The teacher also used fillers when a lesson ended and time did not allow her to begin another subject. These included games such as Simon Says as well as games like Cherry Pie which uses spelling words, vocabulary words, or other familiar words in a spelling bee type format.

Closing routine. The last large block of time each day is used for special classes such as art, music, and physical education. When students returned from these classes they sat on the floor in the front of the room while the teacher sat in the rocking chair and

read to them. This continued until it was time to clean up and get on the buses. On the last day of the week they finished early so that students had time to clean out their desks before going home.

Observer comments. Although not all 13 best practices identified by Zemelman, Daniels and Hyde (1998) are evident in the classroom several were present. Students had opportunities to choose from activities during the guided reading time and to choose a topic for power writing. They were encouraged throughout each day to use good manners. Lessons were presented in short segments which is an age appropriate practice and art activities were available for a creative outlet during center times. Students were responsible for their own belongings and were held accountable for their behavior. Interaction was discouraged except during breaks and center time when the teacher is less directive. Students had an opportunity to express themselves in journal writing which can be reflective if the students chose to be so. A few activities were related to the real world, but the majority of activities were presented because students needed to know how to do the skills. Hands-on activities were evident during guided reading and in math activities at the request of students.

During a conversation with me one morning the teacher said she liked to be prepared for her week. She did not welcome unscheduled interruptions because she did her lesson plans well in advance and did not like to make changes in them. See Appendix M for a transcript of the interview.

Non-Board Certified Teacher Number Two

Setting. Observation seven took me back to the school in the rural area surrounded by farms and coalmines where I observed NBCT Number Three. The school was about

12 years old and was the result of a consolidation of six small schools. Each of these schools was still represented by decorations in the hallways. The building was large and colorful with a welcoming entranceway. I signed in at the office and found my way easily to the classroom across from the one in my previous visit. The walls of the school were decorated with student work and newspaper articles about the school's events. Tables were in the hall which I soon discovered were for parent volunteers to use while working with students or doing paperwork for the teachers.

The teacher had just come into her classroom to prepare for the day as I entered. She welcomed me to her room and continued her preparations. The room was large with ample storage space for students and teacher. The area near the sink was tiled while the rest of the room had carpet. The teacher had a rug in one section for large group floor activities. The desks were arranged as tables with other tables around the room for the computers, guided reading, and a listening center. The bookshelves in the room were low and easily accessible to students. The teacher's desk was out of the mainstream of the class and was surrounded by teacher storage areas and a computer.

A wide variety of posters and charts were in the room including the school pledge, the Pledge of Allegiance, a chart on tall, small and below the line letters, a number grid from negative nine to 110, a number line with negative and positive numbers, a poster of numbers with words and pictures, and a hundreds chart. In addition to these resources was a poster of a thermometer with colors to indicate warmth, a pumpkin with writing ideas, good writing traits, alphabet posters, and coloring papers by the students to demonstrate four square writing, a sign language poster for numbers and letters, and samples of words beginning with each letter of the alphabet. A word wall had been

started on the closet doors near the calendar, which featured the seasons, months, and days of the week. There was a helper chart but it did not seem to be in use at this time.

The room was arranged to give the teacher and students room to work in small groups, at their desks, and on the floor in a large or small group. A variety of materials were available to students along with a wealth of information on the walls for them to access. It appeared that it was a room where children can learn and feel welcome.

Morning routine. As students entered the room in the morning they put their book bags and coats in the storage closet and turned in their folders. The teacher reminded them of breakfast, their lunch sticks, and morning work. Two older students came to the room to empty papers from student folders and put in homework activities. Then they roamed the room offering their assistance to students as they completed morning work. One of the older students updated the daily calendar with yesterday, today, and tomorrow, and created a pattern with colored shapes. However, on the days I was present there was no specific reference made to the calendar. The morning work usually consisted of math sheets and occasionally a language activity.

Students worked quietly with one another on these papers with the teacher reading the directions and sentences if asked for help. The finished papers were put into a basket near the basket where they originally got the papers.   As students worked the teacher gave cues about addition and subtraction by using her arms to indicate which sign to use. When most students were finished everyone stood for the Pledge of Allegiance and their school pledge. At this time students who had been working on Compass lessons at the computers returned to their desks.

Next, the teacher made announcements and discussed problems she found in the previous day's work. One day she used the time to review the zero rules in addition and subtraction and putting names on papers. One day she explained a change in their schedule due a special activity in the computer lab. Many students continued to work on their morning work during this time in order to complete it and not have to stay in at recess.

Language procedures and instruction. On the first day the teacher introduced new spelling words by giving the class a pretest. The students were told to move about the room but there were no assigned seats and there was some confusion during this time. The teacher repeated the spelling words for the students and reminded them to use their best handwriting as they wrote the words. When finished, students turned in their papers when their name was called. The teacher used a count of three to get all desks back into their proper places. Each day students completed an activity with these words to help remember them. One day they wrote the words using two different colored gel pens and another day they wrote them in alphabetical order.

A clapping rhythm caught the students' attention and the teacher directed them to the rug by the board. She introduced *Stellaluna,* a story about bats, and explained that they were going to do some comparisons between birds and bats this week. The students knew this book from last year and were allowed to share their knowledge as they did a picture walk through the book. The teacher stopped to ask questions about what happened and the meaning of some of the vocabulary used in the book.

Following the story the teacher explained the reading stations for the day giving directions for each and the order in which to complete them. She called a reading group

to the table, sent one to the other first grade classroom and had the Title I teacher's group

go to the computers to work on reading software *[The Title I reading teacher was out this*

day].   Each day the teacher used a book on bats for the whole group lesson mixing

fiction and factual books. As they read the books they made a list of characteristics of

bats. During guided reading students worked on activities such as making a bat book,

practicing their spelling words, finishing their morning work, making word family books,

and creating a Venn diagram of birds and bats using a worksheet with the information.

On two of the days special activities followed reading. One was a movie based on

the book *Stellaluna,* and one was an interactive CD based on the book. Students chose

areas to click on for the interaction. While watching this, the teacher emphasized the use

of punctuation in the story, especially the use of quotation marks. The interactions

chosen in the story accentuated character education as well as information about bats.

The other days were spent in working on an acrostic poem with the word bats. This

was done in a large group setting with the Title I teacher joining the group on the rug.

The teacher wrote the letters and students gave examples of sentences that would be

appropriate. Students voted on which one to use and a student was chosen to write the

sentence. Students not chosen were expected to help by spelling words and providing

punctuation. After reviewing the poem on the following days, the students wrote their

own acrostic poems. They used plain paper for the first draft and copied the final

approved version onto special bat shaped paper. Students kept all of their writing in their

writing folders.

Later in the day the class returned to language activities, which consisted of a

scripted phonemic awareness program used throughout the county. The teacher read a

story using a specific word family such as –ack and students called them out while she read. These stories also emphasized rhyming words.

   Math procedures and instruction. Following lunch students worked on math. Each day the teacher told them what materials they would need to get out, such as math books, coins, journal, and/or pencils. The first day they began by discussing a ruler including the number of inches and that it equals a foot. She explained they would be using the edge that went to 12 inches, not the edge with 30 centimeters. She went on to give directions for the math stations with the first one being to draw three things that are smaller than a foot. Other stations included a game called two-fisted penny addition, and lining up dominoes from smallest to largest. Students counted off by threes to determine the groups and she assigned each group to a station. Each child was able to rotate through all stations during math.

   The other days were focused on coins, specifically pennies and nickels and how to exchange them. When the teacher introduced the information about five pennies being equal to a nickel she used the chalkboard and students were to watch as she drew pictures. Students answered questions about how much coins were worth with the teacher emphasizing the need to use the term cents when they answered. The students practiced using pennies and nickels over the next three days using coins and worksheets. Each student had a film canister with pennies and at least one nickel that they kept in their desks for these activities. When students worked in their math books the teacher guided them through each problem and most of work was completed as a large group activity.

Complementary activities. The students participated in an activity called "Everybody Counts" which was on multiculturalism. This was a program that was done school-wide on a regular basis. Students also attended special classes each day that included art, music, and physical education. These classes occurred at the end of each day.

Closing routine. When students returned from their special classes they packed up their book bags and cleaned up their desks in preparation for going home. They checked their folders to be sure they had their homework sheets, which included a weekly newsletter and parent involvement sheets as well as independent assignments for the students.

Observer comments. All 13 of Zemelman, Daniels, and Hyde's (1998) best practices were in evidence in this classroom, but not on a regular basis. The teacher was student-centered in her practices giving support to students and building upon student interests in her lessons. Students had opportunities to be actively engaged in learning through hands-on activities at an age-appropriate level.   Lessons using money and rulers gave students real life opportunities to learn. Students were encouraged to express themselves in a variety of ways including drawing, writing, and speaking. The teacher promoted social interaction among students by providing an option for group work and discussion.

Some of the practices were less apparent in the class although present on some days. These included collaboration and choices. Although students assisted each other they only had a few chances to come to a consensus on a topic or create a group project. The teacher gave students a voice in decisions occasionally but not on a regular basis. The

lessons on bats were an example of integration of the subjects, apparent in these lessons, but were not used consistently.

Reflection, engagement, and higher order thinking skills were not emphasized in this classroom, but were evident to a limited degree. This was also true for a challenging environment. Students were continuously reminded of their responsibilities so they did not need to depend upon themselves. Although these practices (reflection, engagement, and higher order thinking skills) were not as clearly evident as others they were utilized by the teacher. See Appendix N for a transcript of the interview.

Non-Board Certified Teacher Number Three

Setting. This observation took me to another rural area located minutes from an interstate highway and a fairly large city. The school was surrounded by manufacturing plants but sat off the main road, so it was not affected by the noise or traffic that is usually associated with this type area. The building was a one story, brick structure with a main entrance that was kept locked until the buses begin arriving. When the doors were opened I found myself in a large open area outside the main office. The hall was decorated with posters and signs concerning various events in the school and had several announcements about a variety of fundraisers occurring in the school.

The office was a very busy place with teachers, parents, and secretaries getting things ready for their day. After signing in I was directed to the classroom. The school was built when open classrooms were in fashion. Walls had been created with bulletin boards, cabinets, and temporary partitions so the noise of each classroom could be heard throughout the area. Traveling around the created hallways was like traveling through a maze, so after locating the classroom I did not explore much further. As I passed

classrooms I noticed that they were brightly decorated and there was an abundance of student work and posters displayed.

When I reached the classroom, the teacher was working at her desk and greeting children as they entered. Her classroom "walls" were filled with posters and charts. Academic information posted included a hundreds chart, geometric shapes, a variety of math vocabulary, long and short vowel posters, a hundreds chart demonstrating counting by twos, fives, and 10s, a manuscript alphabet, a punctuation chart, second grade words, stations groups, a calendar and daily schedule. One bulletin board displayed student stories glued on pumpkin shapes.

Several of the posters displayed dealt with student actions. These consisted of the state goals and codes of conduct, classroom rules, a behavior chart, a check your work chart, and responsible students graphs. One bulletin board had a group of small posters designating ideas for when your work is completed such as read a book, drill addition or subtraction facts, draw a picture, write in your journal, or write numbers to 1000. Another group of posters reminded students of teacher expectations including do your homework, come to school every day, follow school rules, and bring your planner.

The room was large with several storage areas and a coat rack. The teacher's desk was located on one side of the room near the carpeted area used for large group reading activities. The desks were arranged in two long rows with a few desks beside the long row. The teacher called this arrangement a saw tooth. One student sat off by himself where he was not distracted or a distraction to others. There was a big, comfortable chair in a corner with a rug in front and bookshelves behind. This area was used occasionally

for read aloud. Five computers line the back "wall" of the room and three tables were available for teacher and student use.

Morning routine. Students came into the room and unpacked their backpacks and hung them up with their coats. They notified the teacher (at her desk) about hot or cold lunch and went to breakfast or back to their seats. Students checked the board for a list of the morning's expectations and took out their planners and began work on the morning's assignments. Assignments consisted of getting out planners and spelling homework, putting math homework in the appropriate basket, and getting the worksheets for the day. Reminders were given about sharpening pencils and turning in homework. After the Pledge of Allegiance and office announcements, the teacher told students she was coming around to check for planners and spelling homework and when she was done they needed to get out their spelling books.

Language procedures and instruction. The routines of each day were the same so the four days were treated as a composite for most of this narrative. Students began by opening spelling books to specific pages after which the teacher and students read the words in unison. The teacher read the directions for each page. One student was called upon to give each answer and all students wrote the answers in their books. The teacher gave students wait time and clues if they had difficulty providing an answer. This process continued until all questions were answered and students returned books to their desks.

The teacher instructed students to get out their English books (actually all books are workbooks, not hardback). Three days' lessons focused on singular and plural possessives. The teacher explained that this was a difficult concept so students should

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not be disappointed if they did not understand right away. After writing several examples of singular possessives on the board, the teacher read the directions in the English book. Once again, the teacher read each sentence and a student gave the answer including the correct spelling with everyone writing it in their books. Students completed other pages in the book on plural nouns and combining sentences in the same manner.

A lesson on writing letters came next in the book so they shared times they had written letters. After a discussion on reasons for writing letters, the teacher put an example on the board. She introduced terms such as opening, closing, greeting, and body and where commas were needed. Students completed a workbook page placing commas in the appropriate places in a letter. The teacher explained that later in the year they would learn how to address an envelope to mail the letter. Completed papers from each lesson were put into a take home folder and students took out their materials for reading.

Reading instruction varied each day beginning with the class coming to the carpeted area near the teacher's desk with their books to listen to and follow along with a tape of the story *Mr. Putter and Tabby Fly the Plane*. Following the tape the teacher asked mainly factual questions about the story but did include one about why they would go to the store. Vocabulary words followed with the teacher saying a word, students finding it in the story, and discussing the meaning. These words were listed on the board and on a bulletin board with drawings to illustrate the meanings. Students returned to their seats to complete a worksheet on the vocabulary words, which was checked as a large group activity and placed in the take home folder. The teacher instructed students to get out their vocabulary notebooks and write each word leaving three lines between them to copy the definitions from their glossaries for homework.

On the second day students read the story in a round robin fashion while the teacher asked questions after each page. Most questions were lower level factual ones and students had little difficulty answering them. Following this, students had several workbook pages to complete. These were done as a group with one student answering and others writing the answer. Students completed a comprehension quiz and placed them in the basket when completed.

The third day reading consisted of completing workbook pages as a group followed by a discussion and worksheet on the parts of a story. After reviewing the setting, characters, events, problem, and solution of the story the students completed the worksheet.

The fourth day students worked at stations during the reading block. The teacher explained the directions for each station and referred to the chart for the groupings. Students took turns on the computers and completed the other activities in the order listed on the board. Activities included a reading website on the computers, a sequencing activity on ghosts, scrambled words on a pumpkin, reading partners with small multiple copy books, and copying their vocabulary words from their notebooks onto index cards which they filed alphabetically in a box. During stations students were expected to work independently and without talking. Following reading each day students completed one or two pages from a phonics workbook as a large group activity.

After lunch students did a variety of handwriting activities. These included practice writing of specific letters, writing words, and writing a story. The teacher modeled the correct letter formation for students and reminded them how important good posture is for good handwriting. While writing their ghost stories the teacher did not assist students

with spelling, but told them to sound the words out. She later found an old Dolch word list that she copied for them to put into their journals for future reference. Students were expected to work quietly because as the teacher said, "If you are writing you shouldn't be talking." Several students asked and were allowed to share their stories. Stories were placed in their take home folders

Math procedures and instruction. Math instruction followed the book completely. Students tore out the next page in their books and the next page in their homework books. The homework book pages were put into their take home folders without any explanation of how to complete them. Students were to tear out any incomplete pages and put them in their take home folders as well. The lessons dealt with skip counting and then odd and even numbers. Students used a hundreds chart to complete the work but had no access to any manipulatives. Even though some students discovered a pattern when they were coloring their charts they were told not to go by that but to complete each block individually. The teacher did ask them what pattern they saw when the papers were done. When they were finished with the workbook pages students completed Halloween math sheets with all completed work being placed in their take home folders. *[Observer Comment: Another second grade teacher said some of the homework pages were causing trouble because students did not understand them. This teacher answered that she was going to have to start looking at the papers before assigning them].*

Complementary activities. The week I visited was Red Ribbon Week and the guidance counselor had a lesson for each class on drugs and alcohol. Students watched an episode of *Punky Brewster* emphasizing just say no to drugs. The counselor gave each child an activity book on Red Ribbon Week.

Upon returning from lunch each day, the teacher placed a large replica of the student planner on the board. Students took out their individual planners and completed them together following the teacher's model. All assignments were listed in the planner and it was put away with the take home folder.

Closing routine. At the end of each day, students cleaned up the area around their desks and put their planners, take home folders, and books needed for homework on their desks. They packed up their backpacks, got their coats, and waited for their buses to be called. If time allowed the teacher read a story while they waited.

Observer comments. Only 10 of the 13 best practices named by Zemelman, Daniels, and Hyde (1998) were evident in this classroom and only four of them were with any regularity. Responsibility was emphasized by the teacher. Students were expected to be responsible for their homework, folders, and planners and listen to and follow all of the teacher's directions. Manners were enforced. Students were expected to apologize for bad manners and show respect for each other under all circumstances. Student engagement in learning was in evidence while students worked in their stations, at the computers, and with their hundreds charts, but most of the time they were busy with workbook pages or worksheets.

Scaffolding occurred occasionally in the classroom especially while students were reading. The teacher would assist students in sounding out words or give clues to their meaning. Although instruction was given in short segments, which is developmentally appropriate for this age, the work consisted mainly of paper and pencil activities which are not age appropriate. Social interaction was discouraged except before the morning announcements and no collaboration was in evidence. Students had the opportunity to

write stories on a couple of occasions and to share their writing, but there was no evidence of journaling or reflection during the day. Instruction centered upon the textbooks without any real life connections made. Students were given few opportunities to answer higher level thinking questions with most questions on the knowledge level. See Appendix O for a transcript of the interview.

Non-Board Certified Teacher Number Four

Setting. Observation number nine took me to a large school located on a side street in town and surrounded by businesses and homes. The main entrance to the school and office were centrally located and fairly easy to find. After signing in at the office I was directed down two halls to the classroom. As I walked down the halls I noticed a wealth of student work on the walls along with school announcements and a showcase of events. Most classroom doors were open and the rooms appeared to be similar in appearance.

When I reached the correct room I was welcomed by the teacher who was just leaving to pick up her students from the cafeteria where they gather in the mornings. The classroom was of average size and filled with materials. The teacher's desk was back in one corner out of the normal flow of student activity. Student desks were in rows, but were arranged in groups of two, three or four facing the board, but away from the teacher's desk. The area near the front of the room had a tile floor and was used for center activities. The computers, bookshelves with math manipulatives, science and listening centers, and a reading table were all in this location. Behind the student desks was an area for large group activities on the carpet. The teacher kept two easels here as well as using the back of a bookshelf for a creative writing center. Two reading group tables were in the back of the room, one for the classroom teacher and one for Title I.

The room was full of posters and charts for students to use as resources as they worked. The alphabet chart had samples and pictures of several of the vowel sounds and diagraphs and above that were posters for punctuation and word endings. There was a word wall above the centers area in the front of the room. Numerous posters contained examples of suffixes, word chunks, blends, synonyms, homonyms, adjectives, and types of questioning words such as who, where, and does. Examples of a Venn diagram and a word web were displayed. Math posters were also around the room including place value with specific vocabulary highlighted, a hundreds chart, touch math numbers, a word problem rubric, and coins with their values. Posters reminded students of the writing process, the meaning of fluency and comprehension, phonetic analysis, strategies to use for word recognition, creative writing aids, and story elements. Posters also reminded students of the classroom rules, rules for a good listener, and the school's procedures.

Bookshelves filled most of the lower wall areas. These were filled with math manipulatives, books, bins for art materials, and storage. The classroom was arranged to be student friendly with materials easily accessible. Some of the posters were very high and may be difficult to read, but most information is within reach. This appeared to be a room designed for active learning by students.

Morning routine. When the first bell rings the teacher brought the students from the cafeteria where they gathered upon arrival. Students quickly put up their book bags and coats and prepared for their day by turning in folders and placing guided reading packets in their chair backs. The teacher reminded students about sharpened pencils and homework before they settle in their seats. A math bell ringer was on the board and students took out math mats and begin to work with little or no direction from the

teacher. The math mats had a transparent film that could be peeled off and put on the overhead projector to be shared with the class. Students used computers to complete their Accelerated Reader (AR) tests or work on a speed drill of math facts. While students are completing these activities the teacher took role and lunch count and a helper changed the calendar date, yesterday, today, and tomorrow, and added a penny to track the number of days in school.

After morning announcements and the Pledge of Allegiance, the teacher called students' attention to the calendar. She asked questions about the date and day as well as what is the date one week from today. They also discussed upcoming holidays and special events such as birthdays. When a new student entered the room she was quickly integrated into the flow of the class by having a buddy assigned who would help with procedures and materials. The class welcomed and willingly assisted her.

Math procedures and instruction. Math instruction began with a discussion of the bell ringer activities.   Students brought their math mat work to the overhead to share and to discuss the process and answers. Others shared if they had used a different way to arrive at the answer. The teacher had each student explain how they arrived at their answer and why they used the procedure they did.

The teacher introduced a new chapter on place value by writing 50 on the board and asking students to read it. Then she added zeros and had students read the new numbers, which led to a discussion about the placement of numbers affecting their value. The teacher asked how many digits were used to create numbers and students knew that there were only 10 which they named. This led to a discussion on large numbers and how to count them, which in turn led to one of their tasks. After dividing the class into groups,

students went to different areas to count a pan of macaroni. The teacher encouraged them to use a variety of ways to count, not just using one, two, and three. During the activity the teacher walked around to listen, offer assistance, and ensure all were participating in the activity. When their work was completed, students shared their findings, how they arrived at answers, and discussed differences in procedures used to accomplish the task.

As the week progressed a variety of activities were used to practice with large numbers. Each one was preceded with a discussion on what do you think will …, and followed with a discussion on what did you find. Activities included using rods and cubes to create large numbers and lining up in order according to the numbers on index cards they held. One day they used their large number knowledge to add information to a KWL chart on snakes by discussing the number of vertebrae in a snake. During these activities students were encouraged to work with other students.

At the end of the week students had to determine how many bags of popcorn to order if everyone had earned a bag and some had ordered an extra one. The teacher wrote numbers on the board when students called them out and then the students figured out how many bags were needed. After this activity they played a game that required them to roll dice, move a counter up a graph, and tally the results. This led to a discussion on how numbers on dice limit the answers and why certain numbers occur more frequently. Students put away their materials when instructed and took a stretch break which included a game of Sparkle (spelling bee type game) or a choral reading of a favorite poem from their poetry folders. When reading the poems they often discussed rhyme and patterns as well as the unusual phrasing some poets used to convey a certain mood or create a picture.

Language procedures and activities. The language block began each day with a whole class mini-lesson based on their textbook. These lessons consisted of a review of vocabulary words that included a syllable clapping game, reading sentences with blanks for new vocabulary words, unscrambling sentences, and a review of compound words. Following the mini-lessons, the teacher explained center activities and then called for guided reading groups. The literacy centers included compounds and plurals worksheets, Reader's Theater practice, computers for Compass reading, writing sentences containing quotations correctly using macaroni for the quotation marks, and writing a letter in answer to a story character's request. Each of these activities is based upon a previous lesson introducing and practicing the skill. The centers are listed on a small white board and students are expected to complete them in the order they are listed.

One day, the teacher introduced a new story so they did not do centers or guided reading groups. The teacher reviewed new vocabulary words and students discussed their meanings, and while reading the teacher interrupted to ask questions about the story. After reading the story students did a five-finger retell and then found a partner to read with. When each pair finished they were to write a list of long o words and compound words to share with the group. After sharing their words, the group worked on a T-chart to determine a rule for fit/not fit. She listed several words on each side and students tried to guess the rule, which was adding –s to some words and –es to others. This led to a discussion of various other suffixes and spelling changes required for different words. Between activities the teacher used a variety of quick games to review vocabulary, spelling, and word wall words.

Guided reading groups met with the regular classroom teacher or the Title I teacher almost every day. As part of their activities in small groups they were practicing a Reader's Theater piece. Each group performed their Reader's Theater on the last day of my observation. Prior to the performances, the teacher reminded students what good listeners and good performers looked and acted like. Listeners and performers followed directions quite well and all performances were successful.

Following lunch the activities switched focus to writing. Each day was different beginning with writing a story using a specific list of words in a designated order. Students began creating a story by giving sentences using each word while the teacher wrote them on chart paper. Before writing it, the teacher had students decide whether to use the sentence, rephrase it, or try for a new one. When the class story was complete the teacher read the story that the words actually came from and they discussed similarities and differences between the stories. This was followed with an activity where students, in small groups, unscrambled sentences to construct a story.

On another day, students listened to a story that ended with the main character writing a letter requesting that he be allowed to return to his home. He had been asked to leave due to his bad manners and habits, but promised to change his ways if he could return. The students were to write a letter to Henry telling him whether he could return or not and explain why they chose that particular response. Before the actual letter writing was assigned, the teacher modeled writing a letter and students created one as a group.

After reading a book about making ice cream at an ice cream factory, the teacher led a discussion on process writing. They began by retelling the ice cream making process then explained how to sharpen a pencil. After several examples students were to create a

new kind of sandwich and write the specific directions for making one. Students shared their creations with the class.

On the last day, the teacher presented a painting called *The Banjo Lesson* to the class. She encouraged students to ask what she called, "I wonder" questions. By using leading questions, the teacher encouraged students to consider the feelings and actions portrayed in the painting. After this discussion students found a partner and completed a Venn diagram showing at least two similarities and two differences between this painting and the previous one. Students shared their findings while the teacher created a class Venn diagram.

Complementary activities. At some point each day the teacher read a story to students and encouraged them to give her an "I wonder" statement or question. Although the purpose of the stories was entertainment she used them to provide information on a variety of topics and integrated skills into the discussions without a formal lesson.

Instruction in cursive handwriting occurred on a few days. The teacher explained she was starting this earlier in the year than usual because the students seemed ready. Because it was early she only included it as the schedule allowed. Later in the year it would become part of the regular routine.

Science and social studies activities were available for students as centers during guided reading. These were related to stories in their reading books, so were not done with regularity but only as they were appropriate. Students also participated in art, music, physical education, computer lab, and library classes during the week.

On the last day of each week students earned a workshop time by completing all of their work. The workshop time consisted of activities with blocks, clay, legos, drawing,

and reading. As soon as students completed any unfinished work, they were allowed to join the workshops.

Observer comments. This classroom and teacher reflected all 13 practices identified by Zemelman, Daniels, and Hyde (1998). It is student-centered in that materials were easily accessible to students, the teacher's desk was not the main focus of the room, students were given choices during their activities, and assistance was given to students according to their needs. It was a hands-on classroom that allowed students to manipulate objects such as sentence strips, cubes, and macaroni during their learning. Students had opportunities to work together to solve problems, to read to one another, to talk something over with their neighbor as a review, and to express themselves through drawing, writing, and acting.

The teacher gave students assignments with a purpose that could be transferred to their real lives such as letter writing and why they need to be able to add numbers. The activities and lessons were not segregated pieces but were integrated so that students flow through reading and writing and science and social studies without actually changing subjects. Although the instruction was age appropriate it was also demanding. Students had certain responsibilities such as folders and homework, and were expected to complete them.

Students spent the majority of their day actively engaged in their learning. They had opportunities to create and invent and solve. The teacher asked difficult questions like "how do you know that?", and "can you predict what will happen?". Meanwhile the students were expected to maintain an environment that was pleasing to all students by

remembering their manners and showing respect for one another. See Appendix P for a transcript of the interview.

Non-Board Certified Teacher Number Five

Setting. My last observation took me to a fairly new school located about two miles out of town in a very rural area. The school sat on a hill in the middle of a field with few other structures in sight. As I entered the front door the office was on the left. As I signed in one of the teachers greeted me and introduced herself as the one I was looking for. She led me down the hall to her classroom. As we walked down the hall I noticed student work displayed outside most of the classrooms. The halls were bright and clean and well cared for.

Upon entering her larger than average sized classroom I noticed it was divided into definite areas. Students' desks were in the middle of the room and were arranged in groups to form tables of two, five, and eight with two desks sitting apart. The teacher's desk was along the back wall near a large carpeted area for group work. One end of the room had a sink and storage cabinets that were set back between a storage closet and bathroom. Three tables used for guided reading and center activities were around the outside area of the room. Bookshelves, storage cabinets, and a computer table lined the walls.

Also on the walls were a wide variety of posters and charts many of which were on what the teacher called the smart wall. Students were encouraged to use this information as they worked. Posters included shapes, colors, four seasons, blends, a United States and a world map, bus safety, and the Pledge of Allegiance. Two sets of alphabet cards were displayed, one with a capital and lowercase letter and picture and one with a picture

for each sound of the letter. Several small posters gave spelling rules for words such as those with c or k.

Math related resources included a number line from one to 100, hundreds chart, poster of numbers with words and pictures, pocket hundreds chart with removable numbers, and a chart with math terms and concepts. Student work was displayed throughout the classroom and students each had an individual chart to track stickers earned.

Other information displayed includes classroom rules, West Virginia Code of Conduct, center groups, schedule of special classes, and a calendar. Pocket charts are used for student work and sentence strips. The room offered students a variety of resources as well as a place to display their work which are evidence of a busy and active classroom.

Morning routine. As students came into the room from the cafeteria the teacher greeted each one. They were reminded to put up their coats and book bags and turn in their folders. There was a worksheet on each desk and others on a table near the sink to be completed when their belongings were put away. The papers were also posted on the board so students could see which ones to do. The last one was usually an art related activity while the first ones were math or language related. As the students worked the teacher took lunch count and emptied student folders. Students were allowed to chat with one another as they worked until the teacher gave a two minute warning for work to be completed. When time was called students put their papers in their pockets hanging on the wall by the door.

Students took out individual calendars as the day's helper found a pointer and went to the large class calendar. The teacher asked questions and the helper provided the day, date, yesterday, today, and tomorrow, and the month. It was the 14th day of the month and the helper chose to count the days backwards; he pointed to each number and the whole class counted. The helper then determined what to put for the weather and led the class in the Pledge of Allegiance. The teacher signaled with a drum for students to come to the carpet for sharing time. Each child had the opportunity to share something from their weekend while the others followed rules of an attentive listener.

Language procedures and instruction. Xylophone notes signaled students to the carpet facing the teacher who had flash cards with a variety of letters, diagraphs, and letter combinations. As she went through the cards students named them using terms such as diagraph "ee" or a consonant sneaky e for "a_e". The teacher used flash cards with vocabulary and sight words in the same manner. Students returned to their seats and took out pencils for spelling.

On the first day the teacher gave the spelling words as a pretest. She enunciated each word giving clues for words that had two sounds but three letters or the /k/ sound spelled with the letter c. Following the test, the helper handed out a paper with the correct spellings of the words. Students checked their papers, circled the incorrect ones to study and placed both papers in their folders.

On all other days following the phonics work in the large group session, students returned to their seats to complete a worksheet on the new sound introduced during the lesson. The teacher modeled one on the board and then students modeled several before they were instructed to complete the sheet independently. One section was marked to be

done for homework. This activity and the one with the flash cards were linked to the

Saxon Phonics program used in the county system.

Completed papers went into folders, unfinished work went into pockets on the wall,

and students then had a quick music break for stretching. Students walked around the

room while they sang and used appropriate hand motions to the music. When they

returned to their seats they were prepared for reading which varied from day to day.

One day students reviewed vocabulary from a previous story by reading each word

and placing them on the word wall under the correct letter. When a student had difficulty

reading a word the teacher gave the vowel sound as a clue. Next, the teacher introduced

a new set of words by having students read sentences and fill in the blanks with a new

vocabulary word. She reviewed each word and then students read the sentences and

figured out where the words belonged. The teacher helped read sentences when

necessary and led the class as they read the completed sentences in unison. Following

this activity, the teacher read a big book about sharing food. She introduced the title and

author and asked what students thought it would be about allowing for several answers.

At the end of the story there was a short discussion on their predictions before students

were given an assignment to go back to their seats and write in their journals about some

kind of food they share. Each child shared a food as the teacher wrote their responses on

the board. Students worked on their writing and illustrating until the timer rang.

Completed work went into a writing binder and incomplete work went into their pockets

on the wall.

When students returned to their desks they took out their reading books and did a

picture walk through a new story. After several questions about the story, they listened to

a tape of the story following along with their "magic fingers". They put away their books and returned to the carpet for an explanation of literacy stations. The teacher introduced each one and explained that they would only have time to do one today. The stations included coding words (Saxon Phonics terminology), practicing sight words with flash cards, and writing words for pictures, singular and plural forms, reading a book of choice, short vowel games, and practice spelling words.

On another day students partner-read their old story and then did a round robin reading using Mr. Turkey to indicate whose turn it was. They were reminded to use their "magic fingers" as the class read the story twice. They turned to the next story which dealt with sharing food and after a short discussion, listened to it on tape and then put away their books. Literacy stations followed with each student working at two stations. Later in the day, the teacher shared another big book with students. This one also dealt with friends but in this case the friends would not let one of their friends share information with them. Students were able to pick up the pattern and read along as the story progressed.

On the third day the teacher introduced a story about Pilgrims through a discussion of what the children already knew about Pilgrims, Native Americans, and the first Thanksgiving. Following this they talked about the differences in how they got groceries, talked to their family and friends with telephone or computer, and how to start a campfire. Students compared the way they do these things today with the way Pilgrims and Native Americans did them and then listened to a nonfiction account of life in the days of the first Thanksgiving. Only one rotation of the literacy stations followed due to a special program in the gym.

On the final day, students read the new story from their reading books along with the teacher and then partner read it twice. When finished they returned to their seats and made stick puppets to use when they read. After completing the puppets, they passed Mr. Turkey for round robin reading of the story using their puppets to follow the words. Upon completion students put away their reading books and took out their journals. The teacher modeled their first sentence "I like _____ best". She mentioned that they had read two stories about sharing food and they were to decide which was their favorite and why and write this in their journals. Meanwhile the teacher took one group at a time to the reading table to listen to them read from their reading books. The only reading strategy in evidence was sounding out words although the teacher encouraged them to use the pictures as clues. When all groups had read she called individual students to her desk to read their sight words while others completed their journal writing. Students did two rotations through the literacy stations and then shared cookies the teacher had made for them.

Math procedures and instruction. Math activities were different each day beginning with their math books, pencils, and ten counters. The teacher used the xylophone to quiet the class after passing out the counters. They were solving problems with sports' teams discussing the rules sports have and that one of them is the number of people on a team. They used the counters to designate the team members. The teacher read each problem while students illustrated it with counters and then wrote the answers in their books. Students worked with a partner on the more difficult problems. When the problems were finished everything was put away and students went to the carpet where the teacher gave directions for a new game. They played with a partner and numbered cards with each

player turning one over and adding the two numbers. The first to answer correctly kept

the cards. The game caused a lot of noise, but students were definitely practicing their

addition facts until the teacher signaled with maracas to clean up and return to their seats.

The next day they played a game of memory. The teacher showed a pattern of dots

using the overhead and students copied it after it disappeared. After three or four shapes

they put away papers and pencils and learned a new game using dot cards with a partner.

This was another example of an addition facts game. The teacher asked how they liked

the game and students responded with frustration because it was so difficult to get to the

number 12 with the cards they had.

One day the teacher asked all students who could write from one to 10 to stand up.

All students stood up and then were asked to be seated. The teacher continued by talking

about a trip to Mexico where a group of people called Mayan Indians lived and wrote

their numbers in a different way. The teacher modeled a few of their numbers for the

students and asked what they thought would come next and why. Students were able to

continue the pattern through 10 which led to a discussion of the pattern they followed.

This led to a discussion of which way was easier and why and several students had

opinions they shared. The teacher then put up an overhead of a review for their chapter

and had students go to the board and answer each question.

The teacher introduced math centers and students worked at them for the rest of math

time and continued them the following day. The centers included worksheets on addition

and subtraction facts, a turkey art project, bingo with beginning consonants, reading and

coloring a graph, and building a fort. Students worked in groups and were encouraged to

cooperate and collaborate as they worked.

Complementary activities. During the week I observed the school celebrated National Education Week. As part of this, students created thank you cards for one of their teachers. This teacher limited their choices to their kindergarten, physical education, art, or music teachers. Students worked on the cards throughout one day and delivered them at the end of the day. The next day students drew pictures of their favorite books and these were displayed in the classroom.

Students went to special classes during the week including music, art, and physical education. They also worked two days in the computer lab on reading and math activities from Compass.

Closing routine. At the end of the day, students had the opportunity to go to fun centers. These consisted of puzzles, games from the literacy and math centers, blocks, and art activities. Following clean-up, students packed their book bags, got their coats, cleaned up their areas and lined up for their buses. The teacher said that occasionally she would read to the students instead of fun centers and one day a week they would Drop Everything and Read.

Observer comments. Although all 13 best practices identified by Zemelman, Daniels, and Hyde were evident in this classroom, not all were seen on a regular basis. Students had opportunities for active, hands-on learning each day with manipulatives and centers and were able to collaborate and interact with their peers during these times. Students expressed themselves through writing, drawing, reading, and music which provided them chances to be engaged in their learning. Questioning by the teacher often required students to think about why something occurred or what they thought would happen if, so students were encouraged to delve into why, not just what. The teacher

expected students to be responsible for their belongings, their homework and their behavior. Decision-making opportunities were usually limited to behavior choices, a favorite book, or a picture to draw. The holiday and National Education Week observance provided opportunities for purposeful learning.

Present, but less obvious were the chances for students to reflect on their learning through discussions or learning logs. Although some activities were integrated by using the holiday theme separation of subjects was apparent throughout much of my observation. Student interests were addressed through choices of a favorite book or food, but a student centered atmosphere with scaffolding was not in evidence. Although in many ways the class was age appropriate, short segments, manipulatives, and repetition, one activity stuck in my mind. These were the puzzles the students had available to them; they were using wooden framed puzzles while previous classes on this level were working 100 piece puzzles. See Appendix Q for a transcript of the interview.

CHAPTER FIVE: DATA ANALYSIS

This chapter presents an interpretation and analysis of data acquired through 10 observations in the study. The study was designed to investigate whether grades one and two teachers in West Virginia with National Board Certification and grades one and two teachers in West Virginia without national certification, but considered highly qualified, use the same best practices specified in the research. Specifically the following question s were addressed:

1. Are classroom practices of teachers with National Board Certification different from those without certification?

2. Is National Board Certification indicative of a highly qualified teacher as demonstrated by their classroom practices?

An in-depth review of the literature by Zemelman, Daniels, and Hyde (1998) identified 13 practices that characterize a model classroom using the standards and recommendations from the National Council of Teachers of Mathematics (NCTM), the National Council of Teachers of English (NCTE), the National Science Teachers Association (NSTA), the National Council for Social Studies (NCSS), and the International Reading Association (IRA). These 13 best practices are: (a) student-centered, (b) experiential, (c) holistic, (d) authentic, (e) expressive, (f) reflective, (g) social, (h) collaborative, (i) democratic, (j) cognitive, (k) developmental, (l) constructivist, and (m) challenging. These practices and the emerging themes of reflection, transition, modeling, research, and changes in practice, were used as a basis for the interpretation and analysis of data.

Findings

This section provides the findings organized by the 13 best practices. Each practice will include the findings for the National Board Certified Teachers and those without the national certification independently followed by a comparison of the two groups. The data were gathered through 40 observations, 10 interviews, 40 sets of field notes, and 10 checklists of the best practices. The data were then coded according to the practices and this section clarifies these findings.

Best Practice Number One: Student Centered

Student centered instruction builds on a student's natural curiosity and allows a student to investigate his or her own interests in an atmosphere that balances teacher led experiences with student led experiences. Indicators of this practice include student questions provide direction to instruction, student created goals, and lists or discussions on topics of student interest (Zemelman, Daniels, & Hyde, 1998).

National Board Certified Teachers (NBCT). Each of the five teachers emphasized the importance of the child in her classroom. Student needs were the central focus for determining how to teach a specific skill. "Whatever the students need and whatever works best for them is what I do" stated one teacher. Another declared, "Everybody learns at a different level … has a different learning style … and I need to get to know an individual child and how to reach their learning style." Others mentioned that they look at what each child needs and try to show them in a way that makes sense to them. Two of the teachers talked about learning as a spiraling staircase that you take children up; "They may go at different speeds, but you continue to take them higher."

Student centered instruction was evident in all five NBCT classrooms on a daily basis. Indicators included students writing on a topic of choice, students choosing books for independent reading, choosing an activity during activities or fun center time, choosing a branch of the Armed Services for a project, and choosing a topic for journal writing. In one class, when students asked to complete an assignment in a different manner they were allowed to use any method they chose as long as the final product fit the assignment. Three teachers interspersed music, stretching activities, and yoga to calm the wiggles or exercise the bodies to help maintain student focus.

Non-Board Certified Teachers. Each of these teachers expressed her understanding that every child is different. One remembered something a principal had told her and she never forgot, "all students can learn they just don't do it on the same day in the same way." Another expressed in her personal philosophy that "every child is a unique individual and that every child walks into my classroom at their own point of learning." This idea was expressed by a different teacher in a similar fashion, "everybody has a different channel of learning. I'm trying to hit as many as I can." A third maintained she was more aware of their home life and tried to adjust to those changes while trying to "find a way to reach each one." One teacher believed her room was "more child centered in that they have a little bit more authority over what they can do to make decisions" and she later stated that "wherever a child is at, I think it is real important that we just go from there."

Each of these teachers professed a belief that children are different and have different needs in their classrooms. Each of the classrooms was structured in a fashion similar to the rooms of the Board Certified Teachers' rooms. However, in one classroom the only

evidence of student-centered instruction was during the time between teacher directed

activities when students could choose to draw, read, or talk. Two classrooms showed

little evidence of student-centered instruction despite one classroom having several small

group activities. The students were able to choose books to read and topics for writing in

journals. The final classroom also had negligible evidence of student-centered activity.

Summary. This information led to the supposition that although all 10 teachers

stated that they believe in a student-centered classroom where each child comes with a

different set of needs and on a different level, not all of them included practices that

addressed these needs. The five National Board Certified Teachers included student-

centered activities in their classrooms on a daily basis while those without the

certification included the activities sporadically. Only two non-certified teachers

provided opportunities for students to choose books of interest and topics for writing.

Best Practice Number Two: Experiential

Experiential instruction is hands-on, active and concrete and allows students to work

with objects, real texts, group projects, and experiments to draw conclusions and discover

implications. Indicators of this practice include reading whole texts, using manipulatives,

conducting experiments, role-play, debate, and graphing activities with objects

(Zemelman, Daniels, & Hyde, 1998).

National Board Certified Teachers (NBCT). The five NBCTs recognized the role

of hands-on learning in their classrooms. One simply stated, "I teach very hands-on"

while another explained that she began in math looking at activities that could be

completed with manipulatives. She realized the children needed to use objects not paper

and pencil and said, "I look at a worksheet and I think how can I do that with hands-on

materials?" Another teacher described herself as a hands-on teacher who considers the best compliment the students can give her is to say, "We didn't do anything today but play." The fourth teacher talked about using math manipulatives and station activities. The final teacher did not mention manipulatives or hands-on activities directly but referred to the white boards the students use during whole group work and how much she disliked teaching when she relied heavily upon worksheets. She also described using balloons to represent the days in the calendar activities each day. She explained, "The popped balloon represents yesterday, the new one they blow up during the time is today, and the one picked for the next day is tomorrow;" this provided a visual representation of the days.

In each of these classrooms there was evidence of hands-on, active work. Teachers used manipulatives to teach math including cubes for counting and patterning, flash cards, graphs, T-charts, calculators, clocks, white boards and markers, and a variety of counters. Not all of these were in evidence in every classroom, but manipulatives of some type were used on a daily basis by the students in each room. In two of the rooms teachers had students clap out the syllables of their word wall words. Two teachers had students graphing information from the class; in one case it was lost teeth and the other tracked scores from a math game they played each week.   Students used computers in all five classrooms or in a lab setting for math and language activities and learning games. Learning centers or stations were in evidence in each classroom on a daily basis. Students were involved in a variety of activities in each of the NBCT classrooms.

Non-Board Certified Teachers. The five non-certified teachers all mentioned the importance and role of manipulatives in their classrooms. One explained that she uses

"anything concrete to help them especially in math" and that "when it comes to worksheets, I don't do very many of them." Another mentioned she used to be a traveling teacher and did not have much time to do a lot of activities, but now with her own classroom she can do "more hands-on, interactive learning." The third teacher declared that she put "the kids that need more hands-on, stay focused type things closer so I can keep their attention" but admits that she has not done many hands-on activities this year "because of the kind of group I have." She appeared proud of the fact that "the third grade teachers tell me they can always tell which ones were mine because they're more prepared because they've learned to copy from the board; they've learned how to copy from a book." The last two teachers mentioned the improvement in the math program due to the use of manipulatives. Three of the teachers used learning centers or stations on a regular basis according to their interviews.

Hands-on activities were in evidence in all five classrooms during the observations. However, not all teachers used manipulatives or active learning on a regular basis. Four of the teachers used computers regularly, students in one class used them in a lab setting only, in two classrooms they were used in the lab and the room and in one class students used them in the room only. In all cases the students worked on math and language activities and games. Manipulatives were in evidence mainly in math or calendar activities. Students moved sticks or coins to tally the days in school, lined up for ordinal number practice, used a hundreds chart and calendar at their desks, played games with pennies, dominoes, and dice, and drew pictures of objects greater than or smaller than others. In one classroom each student had a math mat to work on instead of paper and pencil. Counters, numbered cards, and flash cards were also used in math classes.

In two classes students assisted the teacher in writing and editing sentences, clapped out word wall words, and wrote words with markers or colored pens. Three teachers used learning centers on a daily basis and incorporated a variety of hands-on activities during that time. One teacher used stations one day during the observations and said this was a normal occurrence. One teacher did not use centers, but did allow students free time to choose any activity during guided reading.

Summary. This information led to the supposition that all 10 teachers used experiential practices in their classrooms although to differing degrees. All five NBCTs used active, hands-on practices on a daily basis during the observation. Three of the five non-Board Certified teachers used similar practices on a regular basis. Two non-certified teachers practiced experiential instruction on a limited basis with a lot of teacher control. These teachers gave limited access to manipulatives during center time once a week or free choice time, which occurred occasionally during guided reading and in one math activity throughout the observations. The differences in experiential practice appeared to be linked to consistency of use.

Best Practice Number Three: Holistic

Holistic instruction allows mental connections through integration of information in the context of real life. Indicators of holistic instruction include grammar skills taught using actual writing samples instead of sentences in isolation, reading whole books and using them to discuss parts, and whole-to-part activities such as reading words and then discussing letters and sounds (Zemelman, Daniels, & Hyde, 1998).

National Board Certified Teachers (NBCT). Only one of the teachers mentioned this practice in the interview. She stated in her philosophy of education that she takes "a

holistic approach if you are allowed to use that word anymore. You know, I pull everything together." While the others made no mention of it in their interviews there was evidence of holistic instruction in their classrooms.

In the first classroom the teacher incorporated students' word wall words and new vocabulary words into their story problems during math instruction. During math centers students worked on patterns emphasizing the vowels in their names and the teacher sang a rhyme about vowels as they worked. Music, poetry, and rhymes were used throughout the day regardless of the specific subject. Another teacher incorporated art, reading, science, and math into learning stations that students rotated through during guided reading. Each of these activities included reading, but was structured around another subject. She integrated vocabulary from other activities and events into the students' reading work including observation and flexibility to explain unusual events in the room during the week.

The teacher who stated she used a holistic approach did so by using language as the focus of instruction and tying in other areas through language experiences. Math was independent of the language, but science and social studies were incorporated into the reading along with music and art activities. Although the last two teachers did not use this practice as obviously as the others, there was still evidence of it. In both classes language was a part of all activities during the day with art and music integrated into many of the lessons.

Non-Board Certified Teachers. None of these teachers mentioned holistic instruction during the interview. In two of the classrooms there was no evidence of it; each subject was treated as a discrete entity with no connection to another. One

classroom's instruction was based entirely on the textbooks with each lesson being introduced with the instruction to take out the language book, math book, spelling book, or reading book. The other teacher did allow students to do some art activities during guided reading groups but they were free drawing and unrelated to any curricular proceedings. Another teacher related National Education Week and Thanksgiving activities to her instruction during the observation. She used these themes during math, bell ringer activities and for special art projects during center time.

The last two teachers did integrate different subjects into activities in the classroom. Both used reading and other language activities as the basis for the instruction, but incorporated science and math into their learning opportunities. One used a discussion on snakes to count the vertebrae and then read nonfiction and fiction stories about snakes. Another did acrostic poems about bats after reading *Stellaluna.*

Summary. Only one teacher mentioned holistic instruction as a part of her philosophy. Although holistic practices were not highlighted in the interviews they were evident in all five NBCT classrooms and three of the five Non-Board Certified teachers' classrooms. The five NBCTs and two of the others used this practice consistently while the other three either did not use it or used it sparingly.

Best Practice Number Four: Authentic

Authentic instruction allows students to investigate ways to do activities for real purposes. Indicators of authentic instruction include discussions relating text to self or text to world, math activities such as dividing a pizza or cookies among classmates, and problem-solving real situations such as a playground conflict (Zemelman, Daniel, & Hyde, 1998).

National Board Certified Teachers (NBCT). Only two of the teachers mentioned authentic instruction in their interviews. The first stated that she felt she needed to "give them a real purpose for education, like if you can read you can read the morning message." Another declared that "you have to break it down to its most basic function and then try to show it in a way that it makes sense to the child. I try to relate it to them – we tell stories about things in their realm."

Despite their lack of stating authentic instruction is a part of their classrooms, it was consistently evident in each of the five classrooms. One teacher used a band aid, graphing and eating cookies, and wearing a giraffe hat to aid in student recall of poems. Another teacher used words that related to the week's activities as new vocabulary words. Vocabulary included "observation" since one was occurring in the room and "flexible" due to an unexpected program that interrupted their schedule. She also used class meetings to discuss things like student behavior on the playground.

Two of the teachers used lunch count as a learning experience for children by having them count the number of hot and cold lunches and the absences and determine the information for the office. Students used math skills to add and or subtract the information needed for the lunch form. These teachers also used graphing as it related to the students. In one room students put their hot and cold lunch tickets into a pocket graph and then read the graph. In the other room students who lost a tooth charted it on a graph and the teacher used this to practice reading a graph. In a lesson on telling time, one of these teachers set a clock for lunch time and students were expected to tell her when it was time to go to lunch.

Two teachers used their morning messages to notify students of assignments or expectations for the day. Students discovered they needed to read for a reason. One teacher began a story on fish by allowing students to share stories of their experiences with fish and later introduced a project on Veteran's Day with a discussion about soldiers and students' knowledge of their work. When this teacher wanted to divide the class into two teams she had the students figure out ways to divide the class into equal parts. Other activities in these classrooms included discussions on patterns in their lives, writing letters to request information, math discussions on whether they have enough supplies for everyone, and calendar activities such as days of the week, months, and counting the number of days school was in session.

Non-Board Certified Teachers. Only one teacher mentioned anything about authentic practices in the interview. She said that she wanted "to teach everybody to be a functioning member of society and how to do that as a six-year old." This same teacher, however, used only a few instructional activities that could be termed authentic. She had students write thank you notes to teachers and service personnel as an activity for National Education Week but this was a school-wide planned event. She did discuss sharing food as an introduction to a story on food and students discussed the need to share food with others and later shared cookies with the class. Another story she read led to a discussion about environmental issues but it only lasted a few minutes.

During the four days of observation authentic instruction was evident in two classrooms on a limited basis. In one of the rooms, the teacher instructed students on the letter writing process which led to a short discussion on who they could write to, but students did not write any letters during the observation. This teacher also discussed

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some vocabulary words for their reading story by relating them to the students'
experiences. In teaching about ordinal numbers, the other teacher had students line up
and explained that counting like that was like their grade levels, first, second, and so on.
This teacher also compared their classroom news to the nightly news on television.
These were the only indications of authentic instruction in these two classes.

In the last two classrooms there was consistent evidence of authentic practices in
instruction. One teacher used this practice mainly in math relating their work with
money to the students' experiences with money and their need to understand the value of
money. She also had students measuring various items and led a discussion on why they
needed to learn to measure. During the observation students had a program on
multiculturalism and the teacher applied that to the students' experiences with children
they knew. The final teacher related the reading stories to the children allowing them to
share experiences that fit the topic. She had them write a letter in response to one of the
characters in a story. This character had written to the community to ask if he could
return and the students were expected to respond to his request as if they were members
of that community. Students discussed several of the issues involved in this request
before writing their letters. In another story on field trips, students shared their field trip
experiences and compared them to the story. One day the students were allowed to order
popcorn and the teacher had them determine how many bags to order reminding them of
the importance of getting it right so everyone received one and the money was correct.

Summary. Although only three of the 10 teachers mentioned authentic instruction in their interviews many of them practiced it in their classrooms. The level of occurrence varied widely between and among the groups. Authentic practices were consistently evident in the five NBCT classrooms.   The teachers involved students in activities related to their lives.

This practice was only consistently evident in two of the non-certified teachers' classrooms. These teachers provided opportunities for students to use money, rulers, and life experiences in the class. The other three teachers implemented this practice, but only on a limited basis. They made passing references to how something related to students without expanding on that or allowing them further discussion.

Best Practice Number Five: Expressive

Expressive instruction allows students to employ a whole range of communication including, but not limited to speaking, writing, drawing, dancing, poetry, and drama. Indicators of expressive instruction include opportunities for dramatic expression with dance, art, or drama, think/pair/share activities, writer's chair, skits or performances (Zemelman, Daniels, & Hyde, 1998).

National Board Certified Teachers (NBCT). Only one teacher made a reference to expressive instructional practice in the interview. She said she had learned from the certification process to let students "share their writing, they need to be able to share that and giving them that time … get them in the spotlight." This teacher demonstrated her belief in sharing by allowing students to share their writing each day on a rotating basis. Every child in her class shared work at least one day a week.

Expressive practices were consistently evident in all five classrooms. Writing played a major role in each of the classes although it ranged from a specific assignment to write to writing stories on topics of choice to keeping a personal journal. In each case students were encouraged to share their work with a partner or the class. Classroom sharing was done on a schedule so that each student had an opportunity during the week. In four of the five classes students were encouraged to illustrate their writing. Sharing work with a partner was evident in every classroom. Students in one class reviewed the shared writings by indicating with thumbs-up or down whether they had followed directions. Writing and art were used as follow-up activities to reading a story in three of the classes.

Other examples of expressive practices included students reading a play in small groups and in a large group and singing and using hand motions for a story instead of reading it (*Itsy-Bitsy Spider*). In one class students gave stars and wishes after listening to a story. Stars were what they liked about the story and wishes were the parts they wanted to hear again. Art activities were present in three of the rooms regularly and students in one room had jigsaw puzzles to work on each day. In four classes the teachers used music throughout the day to signal a transition, for calming the students as they worked, for rhythms and rhymes to help with learning, and for breaks in the schedule when students began to get restless.

Non-Board Certified Teachers. None of the non-certified teachers referred to expressive practices although they were consistently present in four of the classrooms. In one class students had only two opportunities to write and these were with a prompt and not shared with the class. The students were going to be involved in a school play later, but had not started to practice yet.

The other four teachers provided many opportunities for writing, art, and drama. Writing was encouraged in three of the classrooms on a daily basis and on occasion in the fourth. Writing activities included journals, acrostic poems, and writing stories, and writing in response to a reading story. Students in one classroom prepared for a Reader's Theater performance during guided reading center time and each group performed for the whole class on Friday. Students in these four classes had opportunities to play word games and math games during centers. In one class the art activities used during centers had to be put away when students became too loud. One teacher provided art activities related to the curriculum on a daily basis. This teacher also used music to signal transitions and to give students a break from the schedule when they needed to move around.

Summary. This information led to the supposition that nine out of the 10 teachers incorporated expressive practices into their classroom. All five NBCTs provided a variety of expressive opportunities on a daily basis and allowed students to share their work with others. Four of the five non-certified teachers also provided expressive opportunities for their students with three teachers doing it consistently and the fourth occasionally. Students in only two of the non-certified teachers' classrooms had regular opportunities to share with their classmates.

Best Practice Number Six: Reflective

Reflective instruction allows and encourages students to reflect or debrief about experiences and activities. Indicators of reflective practices include journals, learning logs, review of the day discussion, and questions such as "what did you learn from …? (Zemelman, Daniels, & Hyde, 1998).

National Board Certified Teachers (NBCT). No mention was made of reflective practices in the classroom during the interviews. Teachers did refer to their personal reflections, but that is not relevant here. Despite the lack of reference to reflective practices all five teachers have students reflecting on their work on a regular basis, but with different degrees of intensity.

All five teachers reviewed previous learning at some point in a lesson either through questions or discussions. One teacher had a class meeting each day following recess to discuss problems from the morning or recess and then to work on problem solving activities. Another teacher used a morning message to review previously presented information. The students also reread the previous day's daily news as a review of lessons learned. This teacher met with the class after center time each day to discuss any problems students encountered while working. Students in this room have math journals they used to explain the problem solving processes they use in their work.

The third teacher had students write responsively in journals after they had finished reading and discussing a book. Students in this class had opportunities to compare books and stories they had read and used T-charts to record the differences and similarities. Another teacher did not use written reflection but led the students in discussions concerning the previous day's events, a special event in school, and strategies they could use for problem-solving. Reflections on the students' thought processes for figuring out an answer were followed with discussions about how people used different ways to find the answer. The last teacher used reflection as a review. Students reviewed class rules each morning and each afternoon the teacher reviewed their homework. During the day students had an opportunity to review each other's work and comment upon it.

Non-Board Certified Teachers. Reflective practices were not mentioned in the interviews and were only regularly evident in one teacher's classroom. This teacher made numerous references to previous work reminding students what they had done earlier in the year. She had students talk to their neighbors about the results of a game they played. The results were presented on a graph. Students had to discuss with their neighbors why certain numbers appeared more often than others on the graph. Following an activity on counting large numbers students shared their findings, explained how they arrived at their answers, and discussed the differences in the procedures the groups used to accomplish the task. Student discussions occurred repeatedly during the observation.

There was no evidence of any reflective activity in one class other than the teacher putting the day's homework on the board for students to copy. The other three teachers had only two examples of reflection in their instruction. One teacher had students write in their journals about what kind of food they would share after reading a story about sharing food. She also asked students how they liked a new math game they had played and allowed students to discuss the various issues they had with the game. Another teacher reviewed information on bats before continuing with an acrostic poem they started the previous day. She also used student homework papers to review problem areas, but without student input. The final teacher used discussion regularly to review previous information, but student input was limited. Students were also given the opportunity to reflect in their journals but many students chose to write stories instead.

Summary. This information led to the supposition that although no teachers actually mentioned student reflection, all five NBCTs used it in their classrooms while only one of the five non-certified teachers used it consistently. The degree of use varied widely

between the non-certified teachers ranging from no evidence to frequently cited evidence. The five NBCTs also varied in their degree of use, but all classrooms had evidence of student reflection on at least three of four days of observation.

Best Practice Number Seven: Social

Social instruction is interactive and allows students to construct and explore hypotheses through social interaction. Indicators of social practices include discussions among students, discussions with teacher or another adult, peer review of work, opportunities for play and to interact, and buddy reading (Zemelman, Daniels, & Hyde, 1998).

National Board Certified Teachers (NBCT). Each of the five NBCTs referred to the importance of young children being social. One only mentioned it in passing in the interview referring to the noise level when students share and knowing the difference between noise and constructive noise. Another mentioned that "noise doesn't bother me a lot … as long as they're discussing something we're talking about." Two teachers referred to the room arranged with desks grouped together to allow students to work and talk together and discuss things with "your eyeball partner or your elbow partner." The fifth teacher emphasized that groups allow peers to interact and that she placed them with "a higher and a lower and try to match personality." She said she learned from the certification process that "children learn from each other and need some chatter and time to work together and talk."

Evidence of these beliefs in the students' need to talk among themselves is found in all five classes to varying degrees. At the lowest level the teacher allowed students to talk with each other during unstructured time. This was time when they could draw or

work on a project. During class meeting students were encouraged to discuss problems and solutions with each other. Formal times for discussion happened regularly, but informal discussion time was limited. The second teacher had similar rules about student talk and discussion, but arranged more opportunities for the students to share with each other. Students were encouraged to work with each other during center time, block time, and art activities. She provided opportunities for group projects that required decision making and opportunities for partner reading. Students were encouraged to assist each other while working unless told otherwise.

The last three teachers provided opportunities for group work or group discussions on a consistent basis. As students completed their morning bell ringer activities they talked about what the right answer would be and helped those working more slowly to get finished. Students worked in groups throughout the day during centers, the morning opening, and guided reading group time. Two of the teachers encourage students to discuss ideas with their partners and to share their writing with them. Students in all of these rooms were persuaded to rely on each other.

Non-Board Certified Teachers. Each of these teachers mentioned student talking in their interviews, but with different expectations. One teacher stated she did not mind noise "if they are working on a worksheet and they whisper a little." Another said, "I don't expect them to be silent because we are social people and cooperative learning taught me they need opportunities to talk and help each other." One of the teachers mentioned that she doesn't usually put students in pods except for science experiments because "they're too chatty." She also said,however, "They can't stay quiet all the time at this age, and I wouldn't expect them to do so." She also stated that they cannot talk

when they are doing something for a grade. During fun activities they can visit. No

mention was made of discussing work or activities with one another.

Two of the teachers referred to the importance of working with one another: "they

learn a lot from one another and they have to make noise if they are working together."

The last teacher said, "I like to have conversations in the classroom, I like for them to talk

with a neighbor or work with a neighbor."

Evidence in most cases supported what the teachers said in their interviews. The

teacher who allowed whispering while doing a worksheet had no evidence of social

practices in her room except between activities or during the long transition times in the

classroom schedule. The second teacher allowed students to interact with each other

during center time while she taught guided reading groups. They helped one another

with work and talked informally. In neither of these classes were there opportunities for

formal discussions between students.

Although the third teacher said she realized students' needs for talking she did not

provide many opportunities to interact. Students read with a partner one day and

participated in a large group discussion on reasons for writing letters. One day students

wrote stories related to Halloween and several shared them with the class. The majority

of the time students were expected to work independently and without talking.

The last two teachers encouraged students to work with one another, talk over

difficulties and share information. Students were provided with opportunities to work

with a partner both in reading and math and to work together in centers discussing how to

complete an assignment. Partner talk was a common occurrence in one of the classrooms

and talk with a neighbor was heard often. These teachers encouraged student talk and discussion both in large and small group situations.

Summary. This information led to the supposition that all five NBCTs recognized the need for social interaction and provided opportunities for this interaction. This was not done in a uniform manner and teachers varied in how much time students could use for discussion on a formal or informal level, but all five teachers allowed students to discuss matters with one another. The five Non-Board Certified teachers differed vastly with one offering the same and one offering more opportunities than the NBCTs. Three of the non-certified teachers restricted student discussion and interaction and kept talking among students to a minimum.

Best Practice Number Eight: Collaborative

Collaborative instruction allows learning from one another including group problem-solving and discussions. Indicators include working with other students to complete a project, conducting a science experiment with partners, and problem-solving activities in a small group setting (Zemelman, Daniels, & Hyde, 1998).

National Board Certified Teachers (NBCT). Four of the five NBCTs expressed beliefs about the importance of collaboration in their classrooms. They each mentioned the idea of working as groups and helping one another in this setting. One referred to the research and stated that "children need to talk about what they've learned about in order to internalize things." She also said that she had "learned a lot about classroom community and talking about problems that arise" during the certification process. Another referred to making her classroom "a big, happy family" and she tried to do this by giving the children "time to work together and talk". One idea she learned from the

certification process was that children could learn from each other and that sharing encourages students to do more. One teacher stated that her class does a lot of "group type things where they work together in pairs or groups of four or five and they are louder because they are bouncing ideas off each other." The last one mentioned the importance of class discussion and "developing a sense of community between the groups instead of competition between individuals".

The observed behaviors matched the interview comments in that the teacher who made no mention of collaboration used it the least amount. Her classroom practices showed evidence of collaboration on a very limited basis and only during math groups. Students worked together on building projects or helped one another to complete math work. They did do some problem-solving activities as a large group with teacher direction. The teacher who had learned that students could learn from one another encouraged student talk while they worked, but had fewer formal collaborative structures in place in her classroom. The teacher grouped students for work, but opportunities to work as a collaborative group were not seen. The groups were mainly support groups for their independent assignments.

The other three classrooms were similar in their collaborative practices. Groups had a project to complete and had to reach consensus before they could begin, they had to figure out how to count a large number of items in the most efficient manner, center groups were to decide how best to complete assignments, students were encouraged to look at another's work if they were having difficulty and ask each other for help, and there were no rewards for one group finishing first. These classroom activities

consistently supported the teachers' views on collaboration and students working together to achieve results.

Non-Board Certified Teachers. This group of teachers had a wider variety of responses to collaborative practices. One teacher did not address it at all, and one said, "The Board of Education with the curriculum we have encouraged us to let them work in pods. I've tried the individual seat thing and I like it … they have to work more independently." The other three teachers referred to grouping in positive terms. One stated that, "they are always in little pods or groups … with the research on cooperative learning that they have opportunities to talk and help each other, that's better than being in their own seats and quiet." The fourth teacher explained how the students collaborated on their classroom rules beginning with an expectations chart and then "we have discussions about how we can make the room a better place." She stated that it is important to "do a good job of kind of taking care of one another". The last teacher referred to the noise they make when they are working together, but said, "You can tell the difference between working noise and disruptive noise … they learn a lot from one another."

The attitudes expressed in the interviews are evident in the classrooms. There was no evidence of collaboration in the first two classrooms. In one classroom the opportunities for collaboration were limited to talking and sharing during reading stations and playing a math game that required cooperation. The teacher did have an activity where the whole class had to come to consensus on the answers to a quiz, but input was limited due to time constraints. One teacher allowed students to decide on what games to play when they needed a break in the day and to reach consensus as a large group to

create a story using a specific list of words. She also provided opportunities for students to determine how to solve problems in math with their peer groups and to work in a group to create a chart of words that fit a set of rules. Students had several opportunities to work together to create Venn diagrams to demonstrate similarities and differences between stories and paintings. The last teacher offered students many occasions to work together, but usually in centers with partners or groups working on similar independent work, not collaboratively. The groups did have one opportunity during the observation to collaboratively build a fort. Every member of the group had to be involved and had to agree on how the structure should look.

Summary. This information led to the supposition that four of the five NBCTs incorporated collaborative practices into their classrooms on a regular basis, but not always with a formal structure. Many of the activities were groups working together but not necessarily to complete a project or conduct an experiment or problem-solve. Only three of the five non-certified teachers had collaborative practices and only one of these involved problem-solving. Although collaborative practices are said to be important in seven of the classrooms, only three classrooms (one non-certified and two NBCT) demonstrate practices that truly fit the Zemelman, Daniels, and Hyde (1998) definition.

Best Practice Number Nine: Democratic

Democratic instruction is based upon a society where students make choices about books to read, topics, and activities. Indicators include students taking part in the decision-making process, students having opportunities to choose books, activities, or topics, and evidence of community such as dealing with conflicts, diversity, and discipline.

National Board Certified Teachers (NBCT). Only three of the teachers mentioned democratic practices during the interviews. The majority of the comments dealt with developing classroom rules. One explained the process stating, "They developed the rules themselves. We do a brainstorming thing where I write down all the things that they talk about and then we break together in groups and … write down what they think is the most important rule that we talked about. We combine as they all have different ways of wording rules. It is a process." This same teacher also spoke about creating a classroom community by developing the rules and talking about problems that arise in the classroom. Another teacher mentioned that since she went through the certification process she "lets them make more decisions about how things are done and give me more ideas." The last teacher explained the procedure for developing classroom rules: "We had a class discussion about things that were important and generated a list of things the children thought would be important to remember. I did guide them on wording because I wanted it to be a positive statement." She also said that she wanted to develop a sense of community not competition in the class.

Although no teacher mentioned it, manners were emphasized in each of these five classrooms through signs, reminders, and praise. Student choices were also evident in all five classrooms. Teachers provided students opportunities to choose a book to read, a different way to solve a problem, an activity during center time, a topic for journal writing, and the subject for a group project. In one class students met to debrief each day after center time to discuss what worked and what did not and in another class, students decided on what songs to sing during transition times. Each of these classrooms demonstrated democratic practices.

Non-Board Certified Teachers. Each of these teachers discussed how the

classrooms rules were developed and the comments varied considerably. One teacher

said she "thought about what the children had the most trouble with in the classroom,

what they needed to work on. I've had these same rules for quite awhile because at their

age they all have the same problems so I don't really need to change them." The second

said, "Basically we talked about the expectations, no talking when someone else talks, to

be respectful, be responsible and our rug rules. These are my rules." The next teacher

explained that "the first week of school I spend almost the whole time going over what's

on my walls and my classroom procedures about how things work." She continued with

an explanation of how she dealt with children who brought toys to the room. Teacher

number four began with classroom rules she has had for several years and then led

students in a discussion of what made a classroom a better place. She said she "likes to

let them feel like they've got some ownership in the classroom and that they can make

some decisions, that's important for them to know that in a democracy the largest group

of people is going to rule." The last teacher explained that rules are "all done in the first

month of school at circle time where we talk about basically the attentive listening and

we practice listening. That's all from Tribes training … we always do that the first

month of school to establish rules." The teacher explained that Tribes is a program that

strives to create a caring and safe environment for children.

Each of these teachers makes the rules for her classroom, but one did involve the

students in a discussion of them and allowed for amendments to fit their needs. This lack

of democratic practices was not evident in the classrooms, though. Each of the five

teachers emphasized manners and the importance of respect in their rooms on a daily

basis. In four of the five classrooms there was evidence of student choices. These
choices included a book to read, recipients of cards, favorite poems, sentences to include
in a class poem, topics for writing, and activities during center time.

Summary. This information led to the supposition that all 10 teachers incorporated
manners into their classrooms and stressed the importance of respect for others. Student
choice was also evident in nine of the classrooms on a consistent basis. However, only
two NBCTs allowed student input in the classroom rules and one non-certified teacher
developed the rules, but discussed them with her class and allowed them to comment
upon them. This is not a practice that is consistently evident in classrooms of the five
National Board Certified or the five Non-Board Certified Teachers' classrooms.

Best Practice Number Ten: Cognitive

Cognitive instruction encourages understanding through higher order thinking
including metacognition. Indicators include questions that go beyond memorization,
opportunities to analyze, interpret, create, or categorize, and questions like what do you
do to get the answer or "how did you get the answer?" (Zemelman, Daniels, & Hyde,
1998).

National Board Certified Teachers (NBCT). Only two teachers mentioned this
during the interviews. One stated that she was "trying to make them independent
thinkers…. I don't answer questions well; I always give it back to them. How did you
get there? How did you get that answer?" The second teacher referred to herself as
"being a facilitator of information; I don't like to come out and give information. I
always like to ask questions and pull the information from them."

Despite this lack of references in the interviews each of these teachers used cognitive practices in her classroom consistently. Higher level thinking skills such as problem-solving activities, comparing stories for similarities and differences, making and correcting predictions while reading, analyzing information on a graph, finding commonalities in words, and finding and explaining patterns were apparent in all five classrooms. Teachers asked questions like "what do you think might happen if?", "what is the date one week from today?", "what other way could you spell that sound?", "how did you determine the story was fiction?" Questions such as why, how, and what if were used regularly during instruction. One teacher encouraged students to use their brains and visualize things while another one encouraged students to deal with little problems themselves and not involve her.

Non-Board Certified Teachers. Only one teacher mentioned cognitive skills in her interview. She talked about teaching reading and how she asked children "what do you think? and had them make predictions." Another teacher's comment demonstrated the opposite view when she said, "I try to work on that [*listening to directions*] because the third grade teachers tell me they can always tell which ones were mine because they're more prepared because they've learned to copy from the board, they've learned how to copy from a book." This second teacher's attitude is obvious in her classroom where the only evidence of higher order thinking was an occasional why question while students were reading their story in the reading textbook.

One other teacher rarely asked any questions to develop this skill, but did lead a discussion on the similarities and differences between birds and bats. The only other evidence in her room was during a discussion on the use of an apostrophe; children were

asked why one should be used. In a third teacher's room why questions were asked more

often including why did they move a straw over from one cup to the next while tracking

the number of days they had been in school. She also had students explain what the

actual question was in a story problem they were working on. The fourth teacher asked

why do you think, what do you think, and why consistently during reading lessons in

large and small group settings. This questioning is the only evidence of cognitive

practices in this classroom. The last teacher applied more cognitive practices than the

previous ones. She used several higher level questions throughout the observation and

had students make predictions about what would happen if and what do you think will

come next. The teacher had students do a problem solving activity each day and had

students analyze a graph they made on the results of a game they played weekly. She

also asked students to make connections between the classroom and their life experiences

such as when they read the book about a field trip.

Summary. This information led to the supposition that all five NBCTs planned

activities and questions that required their students to use higher order thinking skills.

They had exposed their students to situations that require thought and not rote

information in order to respond. Only one of the non-certified teachers did this with any

consistency. Three teachers used some questions that caused thought, but not with any

regularity. One teacher provided students with minimal opportunities to think for

themselves.

Best Practice Number Eleven: Developmental

Developmental instruction is age appropriate showing respect for emerging

capabilities. Indicators include differentiated instruction, evidence of multiple

intelligences, variations in time allocation, and formative assessment (Zemelman, Daniels, & Hyde, 1998).

National Board Certified Teachers (NBCT). The teachers' comments on developmentally appropriate instruction are similar to those on student-centered instruction. Student needs were the central focus for determining how to teach specific skills. "Whatever the students need and whatever works best for them is what I do" stated one teacher. Another declared, "Everybody learns at a different level … has a different learning style … and I need to get to know an individual child and how to reach their learning style." Others mentioned that they look at what each one needs stating, "I look at each one more carefully – assessing where they are and what their needs are." One teacher referred to her room arrangement saying, "I've got one isolated here in front of me because academically he's very low and he's very distractible and I put him with M so he could be M's helper so that he feels good and is focused on me." One teacher talked about how much she has learned about her students since she began conferencing with them.

Developmental practices were evident in each of the teacher's classrooms, although differentiation was most visible in one particular room. Assignments are shorter for slower working students, spelling papers look different with some having beginning letters preprinted, some have the words numbered, and some students need to simply trace words rather than write them independently. In addition to this the teacher kept all instructional sessions short and stopped one prematurely when she saw students wiggling and losing focus.

All five teachers kept the learning segments short and varied the activities between more and less active ones. As noted in the experiential section, these teachers tended to keep students involved in their learning. Teachers tended to provide different types of assistance to students depending upon their ability, spelling words for some, helping others find where to look for the words, or just telling them to use their resources. In one case, it was more what the teacher ignored than what she did that was appropriate. She recognized one student's need to move around and allowed him to wander as long as he was not disruptive and completed his work. There was little evidence of formal formative assessment occurring in these classes, but all of the teachers spent one-on-one time with each student during the observation.

Non-Board Certified Teachers. Four of the teachers referred to developmental practices in the interview. One explained that her philosophy was "to take every child where they are and progress them as far as they possibly can. My philosophy is to find which strategies work best to help all individuals." Another stated that she is "more aware of their problems and their home life and tries to make exceptions for some of them for certain things." She also said, "I'm still a stickler for as long as it's class time we'll do class work and the fun comes later and if we don't get the class work done there is no fun time." One teacher stated, "To me I've always found that if you do something just a little bit of time everyday that's better than if you spend three weeks on it and drop it totally." The last one talked about the different learning channels children have and that she tried to address each one.

It was difficult to determine whether these teachers actually practiced what they said they believed. In each class there was some evidence of developmentally appropriate

practice, but only on a very basic level. In every class the day was structured so that lessons were in short segments with several transitions. In one class that was the only evidence of developmental practices; everyone did the same thing regardless of ability or need. In another the segments were short but the work was often inappropriate because it was based solely on workbooks and worksheets with fill-in-the-blank answers done in a whole group setting with everyone doing the same work in the same manner. The next two classes showed evidence of more appropriate practices allowing students to work together and experience more hands-on activities. However, in one class I noted second grade students working on wooden puzzles with frames while in another class first graders were completing 100 piece jigsaw puzzles.

The teacher in the last classroom demonstrated developmental practices throughout the observation. She used a variety of teaching techniques and interspersed active and less active lessons throughout a day. She also provided different levels of assistance to students as they worked. There was little evidence of formal formative assessment other than conferencing in two of the classrooms.

Summary. This information led to the supposition that all 10 teachers used the most basic developmental practice of keeping lessons short but that two of the non-certified teachers exhibited no other indicators of this practice. The five NBCTs demonstrated an understanding of developmentally appropriate practices but only one included a focus on differentiated instruction and class work. Only one of the non-certified teachers demonstrated a level of understanding equal to the NBCTs using many of the same techniques.

Best Practice Number Twelve: Constructivist

Constructivist instruction allows students to recreate and reinvent content through experience, immersion and engagement. Indicators include student development of their concepts and ideas, student evaluation of learning, and application of learning to a new situation.

National Board Certified Teachers (NBCT). Two teachers commented on constructivism during the interview. One teacher said that she has learned to let students make more decisions and give her ideas "like what we did with the fish paper up there today. I didn't have any basic idea of how it was going to go or what it would look like and we just took ideas from other kids and everybody kept on building on somebody else's ideas. So I do a lot more especially in social studies and science where they come up with their own ideas about how to do things." The second teacher described herself as a constructivist stating, "I really believe that children construct their own knowledge within certain constraints that the teacher is here to provide. I think the teacher has to model constantly … just everything has to be modeled."

Students in all five classrooms were actively engaged throughout the day. Teachers provided opportunities for students to be involved in their learning through stations and centers, reading, math activities, art projects, journaling, and building with a variety of types of blocks. Opportunities to invent or create were more limited in three of the rooms, but in one, students were able to follow their own ideas as they created fish and later worked on a poster project, as the teacher stated in her interview. In the last class students were given a variety of materials and directions to create a pattern. With no further information students were able to create a variety of finished products using their

own imaginations. One teacher gave students daily opportunities to write and illustrate stories creating their own small books to share with the class. There was no evidence of any formal self evaluation in any of the classrooms.

Non-Board Certified Teachers. Constructivist practices were not mentioned during the interviews and are not evident in all of the classrooms. In one classroom student engagement was limited to worksheets and workbooks with very structured creative activities such as write a story about or color and cut out this picture. In the second classroom, the teacher involved the students in more activities, but they were directed by the teacher and students were not given opportunities to create on their own. One teacher allowed students to write or draw freely while she worked with the guided reading groups. These students had access to art supplies and writing materials as long as they were not loud or disruptive. There was no focus to these activities; students drew and or wrote whatever they chose. Another teacher gave the students the opportunity to make thank you cards for National Education Week. Students had access to art supplies needed for this, were given time to complete it, and had little or no teacher direction. The teacher in the last class encouraged students to create words, sentences, and a sandwich recipe during the observation. Although students worked within a specific framework on these activities they were not limited by anything other than their imaginations in completing them.

In three of the classrooms teachers provided opportunities for students to be involved in their learning through centers, games, reading, math activities, writing, and building with a variety of types of blocks. There was no evidence of self-evaluation in any of the classes.

Summary. This information led to the supposition that although active engagement was evidenced in the five NBCTs' classrooms and three of the non-certified teachers' classrooms it was only on a cursory level in two NBCTs' rooms and one of the non-certified teacher's room. Actual construction of knowledge, immersion in content or application of knowledge to a new situation was not observed. Three teachers, two NBCTs and one non-certified teacher led the others in their knowledge and practice of constructivism, but were still in control of student activities and content.

Best Practice Number Thirteen: Challenging

Challenging instruction gives students choices, decisions, and provides a safe environment for experimenting with increasingly difficult tasks. Indicators include building on prior knowledge, formative assessment to determine level, decision-making opportunities, and a safe environment for making mistakes – lack of criticism for trying.

National Board Certified Teachers. Four teachers talked about challenging their students through decision-making, high expectations, independence, and reaching all levels. One teacher commented on her morning procedure where students blow up balloons to represent each day. She makes them practice this skill "to foster independence." Two teachers mentioned that they use terminology that might not be familiar to students to increase their vocabulary. One said she uses the term punctuation instead of comma to introduce them to proper terminology. Another said she tried to introduce them to the word comprehension to get their schemata growing. "I try to set really high expectations for them; I think expectations are a big part of it." One teacher referred to a comment from a parent complimenting her for reaching the higher level children while still reaching the lower level children.

There was evidence of challenging practices in each NBCT's classroom. The majority of the emphasis on challenging practices in all five rooms came through their expectations of the students' responsibility level. Each of the teachers expected their students to take care of their own belongings, putting them where they belonged, keeping track of homework in their folders, having their materials for the day, and being ready on time. Each of them also gave reminders to students to help them get prepared for the day. All children had folders and were familiar with morning and afternoon procedures in each room.

In one classroom students listened to classical music as they worked and were able to recognize Tchaikovsky as the composer. This teacher also repeatedly told students, "You can do it yourselves" and said on several occasions, "I know you can." In another class students were asked each day to write a number in a variety of ways. This led to one answer of 2x10+9-3=26 with each child striving to be more creative than the one before. Later, this teacher asked the students to figure out how many students were in the class without counting them. This teacher also encouraged students to deal with their own issues asking them, "What should you do about that?" One teacher had directions for the day written in the morning message and students were expected to read this and follow directions.

Non-Board Certified Teachers. Only two teachers referred to challenging practices in the interview, one positive and one negative comment. One teacher said during read aloud she does not just read, but stops periodically and asks "what do you think and make a prediction, those types of things." The other teacher showed concern for the success of

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her students in the next grade and said, "There are so many hard back books in third grade and they have to learn how to copy so I try to prepare."

There was evidence of challenging behavior in each of these classrooms, but only on the level of student responsibility. In each class the teacher stressed the students' responsibility for their folders, belongings, being on time, being ready for the day, and cleaning up their areas. In all five classrooms the emphasis on student responsibility was the only evidence observed; there was no evidence of high expectations during the observations.

Summary. This information led to the supposition that all five NBCTs placed an emphasis on student responsibility and three of the five provide a challenging environment for the students. Three teachers offered students opportunities to learn information beyond the Content Standards which were developed to provide teachers with a broad description of the knowledge and skills students in West Virginia need to acquire in a content area. All five of the non-certified teachers placed an emphasis on student responsibility, but there is no evidence of intellectual challenge in any teacher's room.

Emergent Themes

This section provides the themes that emerged from the analysis of the descriptive narratives and included scaffolding, the role of research, teacher reflection, modeling, and physical setting. Each theme will include the findings for the National Board Certified Teachers and those without the national certification independently followed by a comparison of the two groups.

Scaffolding Instruction

Scaffolding means doing some of the work for students not quite ready to complete a task independently. It is a temporary aid like the scaffolding used in construction and can be described as "teacher does," "teacher and student do," then "student does." (Dodge, n.d.).

National Board Certified Teachers (NBCT). Scaffolding was evident in all five NBCT classrooms. Although each student was expected to complete each assignment, the teachers provided different types and amounts of assistance to students as they worked. One teacher physically shortened the paper for some students so the assignment appeared the same. On a spelling test some papers already had the beginning letter written in highlighter so they only had to trace it while others wrote the entire word. Some students' papers were already numbered while others completed the task independently.

Scaffolding was evident during Writers' Workshop in three of the NBCT classrooms. As students asked for help they received varying levels of assistance from an indication of where to find information using classroom resources, to providing the specific resource needed, to assistance in using the resource, and finally supplying the information.

Non-Board Certified Teachers. There was only slight evidence of scaffolding in these classrooms. In one classroom there was no evidence of scaffolding in any instruction observed. In another room the only indication of scaffolding came when the teacher read directions for students and read sentences or gave clues about addition or subtraction if students asked for help. Scaffolding could be considered present in the

wait time and clues given to students if they had difficulty answering a question.

Scaffolding was apparent in one room with the teacher offering assistance to students in a

variety of ways including reading sentences, spelling words, and giving clues.

Summary. Scaffolding was evident in nine classrooms but to varying degrees. In

the five NBCT classrooms the amount and type of help students received differed with

each child or small group of children according to ability levels. In four of the non-

certified classrooms with scaffolding all children received the same type of help

regardless of ability. When students asked for help reading a sentence the teacher read

the sentence whether the student was in the highest or lowest reading group. No

indication of individual accommodations was in evidence in the non-certified classrooms

during the observation period.

The Role of Research

This theme includes teachers' references to the role research has played in their

teaching practices. The data were obtained through the interview process and not during

the classroom observations.

National Board Certified Teachers (NBCT). Three of five NBCTs referred to the

influence of research on their teaching practices. The first mentioned research on

children's need to talk to internalize information and how that impacted her decision to

allow more noise in her room. She also said that "ideas from other people and research"

were the major influences on her teaching practices. The second teacher stated that she

is taking classes for a master's degree and that the research she has learned has

influenced her practices. She also encouraged her students to learn to use resources: "I

always like to ask questions and pull information from them and then if they don't come

up with it we research it or look it up in a dictionary or encyclopedia." The third teacher said that her room arrangement was "based on research and best practices and things that I've read." She talked about her master's program and how she "discovered research" which made a difference in her practices. The teacher stated, "I was doing lots of things without knowing the research. Learning the reasons why and getting into brain research and those kinds of things really gave me insight into how children learn and what I can do to foster their learning."

Non-Board Certified Teachers. Two of the non-certified teachers alluded to the role of research in their practices. The first one referred to it in terms of the need for students to be social and stated that "with the research on cooperative learning they have opportunities to talk and help each other." Later she mentioned that she taught the way she did "not only because of research but because of the effectiveness of programs I've tried." The second teacher encountered research in her master's degree program and stated "doing that research on the writing and collaboration with peers, reading all that research made me think about what I do."

Summary. This information led to the supposition that three of five NBCTs and two of five non-certified teachers considered research as an influence on their teaching practices. The other teachers did not mention research in any discussions. This could have several meanings and did not necessarily imply they did not recognize the importance of research.

Professional Reflection

Reflection refers to contemplation, deliberation, and thought about teaching practices and strategies used in a classroom. Reflection is a process of thinking critically about

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practice and analyzing actions, decisions, and products by focusing on the process of achieving them (Nottingham, 1998). The data were obtained through the interviews, not the observations.

National Board Certified Teachers (NBCT). Three of the five teachers mentioned the role of reflection in their teaching practices. The first said that the National Board process "taught me to reflect on ways to improve instruction" and that "reflection has made a major difference. It played no role before, but now plays a major and most important role. It made me realize the impact of what I am doing on the students." Another stated she thought she was a pretty good teacher until "the National Boards and when the reflecting – oh! That didn't work; I wasn't giving them enough time… The reflection part changed me and to me it was the control part and how I was presenting my lesson." The third teacher said I've always been reflective because if it didn't work I thought about how I'm going to do it next time. I think I've always been reflective, but I'm more formally reflective, thinking about a different way, a different strategy."

Non-Board Certified Teachers. None of the non-certified teachers referred to reflection either directly or indirectly in their interviews. Since this is an important piece of the National Board Certification process this could be the reason for those not familiar with the process to make no mention of it.

Summary. This information led to the supposition that reflection played a role in the teaching practices of three of five NBCTs and none of the non-certified teachers. Due to the role of reflection in the certification process, others may not be as familiar with the role of reflection in teaching.

Modeling

Modeling is demonstrating an assignment or an activity before asking the class to complete it on their own. It is showing students precisely how to do something or exhibiting a behavior others will learn (Proctor, 2005). Modeling does not include writing an example on the board without an explanation of the thought process required to complete the assignment.

National Board Certified Teachers. Four of the five NBCTs incorporated modeling into their classrooms. The first teacher used modeling in math by demonstrating how to solve a problem. She wrote it on the board and then talked through the process as she solved the problem. She also used modeling in reading by demonstrating strategies such as going back and rereading a sentence or phrase, pausing between words, and using the resources in the room. In writing, she modeled how to use a finger for spaces between words and how to edit work.

The second teacher modeled different ways to solve a problem before asking students to find a way. She modeled strategies for remembering math facts prior to a speed test and writing during their daily news segment of the day. Another teacher modeled the use of calculators before giving them to students, and then after they had the calculators, walked students through the procedure one step at a time. She repeated the process with individual clocks when learning to tell time. The last teacher wrote letters on the large board in front of the room as students wrote them on their individual boards. Following a poetry reading and discussion on poetry the teacher modeled how a poem could be written. As she wrote she used a strategy called "think aloud" sounding out

words and using the strategies she wanted the students to use in their writing. Then

students went to their desks to write their own poems.

Non-Board Certified Teachers. Four of the five teachers provided examples of the

work for students before they completed the assignments, but only two actually modeled

the process. The first teacher wrote math problems on the board and talked about how

she solved them as she worked through the problem. She also modeled how to determine

what a story problem was asking and what math problem to write in order to find a

solution. The second teacher wrote a model letter on the board before asking students to

write one of their own. As she wrote she explained what she was doing and why she did

it.

The next teacher wrote examples of problems, sentences, and letters on the board

prior to asking students to complete an assignment. However she simply put the example

on the board without explaining the process she used to determine the answer or why she

wrote what she did. The final teacher followed the same procedure; she wrote an

example on the board and then students were to complete a paper in the same manner. In

one case she wrote a sentence with a blank, "I like _____ best" and told students to fill

in the blank. Although these are examples, they do not fit the definition of modeling.

Summary. Four of five NBCTs used modeling during instruction on a regular basis.

Only two of the five non-certified teachers consistently used modeling as an instructional

strategy.

Physical Setting

The physical setting involves the room arrangement including placement of student

desks and the teacher's desk, established centers, and areas for large and small group

instruction. It also includes the location of the teacher when students enter the classroom each morning.

   National Board Certified Teachers (NBCT). One of the interview questions referred to room arrangement so each of these teachers made reference to it. One stated her room was arranged to give students "different work areas to work in with the tables used to facilitate teamwork … and the carpet area is good for group meetings and is used regularly." The second teacher used desks grouped as tables because this gave them room for centers and "that way they've got partners and sometimes I'll say use your elbow partner or use your eyeball partner." The third moved her room around fairly often but said, "I like the groupings. This way they have peers and a higher and a lower and I try to match personality a bit." Another teacher said that she used groups for space maintenance, but also "to work in groups. They do work in groups sometimes and help each other with material." The last one stated, "I always do groups; it is based on research and best practices and it develops a sense of community between the groups."

   Each of the classrooms reflected the teachers' comments about groups. Students' desks were put together in groups of four to six and in one room students sat at tables. The teachers' desks were all placed in a corner of the rooms out of the general flow of traffic. In one classroom, the teacher used her desk only as an organizational spot for materials she used during the day.

   One teacher stood at her classroom door and greeted students as they entered the room. One teacher sat at her desk directly across from the door and greeted each student as they entered. The other three teachers were moving around the room and greeting

students as they came in. In all five classrooms the teacher greeted the students and reminded them of their morning responsibilities.

Non-Board Certified Teachers. Since one interview question dealt with room arrangement each teacher remarked on her room arrangement. The first teacher stated that she typically put desks into groups because, "the Board of Education … encourages us to let them work in pods. I've tried the individual seat thing and I like it." The next teacher said, "I never go by lines they are always in little pods or groups. I like a high student, a low student, and an average student in each group." The third teacher said the arrangement was not typical for her: "I used to do rows all the time until a friend of mine showed me the sawtooth and I kind of like it because I am able to reach everybody from the center. Sometimes I do pods. Pods usually do not work. They're too chatty." The fourth teacher explained that every year she tried to find a better way, but due to space constraints this was usually how it was arranged. She kept the desks in groups of short rows and had her desk in the back "because I am not a sitter, I use my desk just to organize things." The last teacher also had concerns about space and that students could not always see the board, but said that "if I had the space I would still probably put them in groups, not as big, smaller groups."

The classroom arrangements suited the teachers' comments about their rooms. The first teacher did have the desks arranged in groups, but did little or no group work. Students did not interact and were told not to talk to each other although they often did. The second teacher did use groups and did some cooperative learning in her class. The third teacher had students' desks in two long rows with a desk beside another one every three desks thus creating the look of the saw tooth she described. Students were not to

talk to one another but due to close proximity often did. The fourth teacher had desks arranged in short groups of rows so that students could turn around to talk to a partner or talk to someone beside them. This was encouraged in the classroom. The last teacher had larger groups of students and allowed group activities, sharing, and talking among the groups while they worked.

The teachers' desks in three of these classrooms were the focus of attention. The three teachers used their desks throughout the day calling students up to the desk or sitting at the desk while students worked. The other two teachers used their desks minimally and as the one commented usually just to organize things.

One teacher brought her students to the room from the cafeteria each morning and reminded them of their responsibilities. Two of the teachers were moving about in their rooms greeting students as they entered. The last two teachers remained at their desks as students came into the rooms. One greeted most of the earlier arrivers, but became busy with papers being turned in and did not greet the later arriving students. The last one did not greet students until they came to her desk to sign up for hot lunch. The teacher then gave them reminders of their morning responsibilities.

Summary. This information led to the supposition that all five NBCTs supported students sitting and working in groups in their classrooms. In all five classrooms the teachers' desks were not the center of focus and used mainly as work stations for the teachers. Four of the five non-certified teachers also used groups, although one did so only because she was told to do so. Neither she nor the fifth teacher encouraged students to work as groups. Two teachers used their desks as organizational places and had them

out of the main flow of the class activities. In three of the classrooms the teachers' desks were the center of attention and the teachers spent a great deal of time at the desks.

Further Findings

The degree level or experience of teachers did not affect the degree to which the teachers implemented best practices. The highly qualified designation of the five non-certified teachers was determined by satisfactory evaluations while the designation for the NBCTs resulted from the certification process.

Students in the five NBCTs' classrooms and one of the Non-Board Certified teacher's classroom transitioned from activity to activity quickly and with little teacher follow-up after the initial directions. These students also worked more efficiently at their tasks and required less teacher input into how to proceed and the procedures when they completed their tasks. The students in the four other classrooms required repeated warnings about completing work and working quietly or keeping on task.

Chapter Summary

This study used a qualitative method of case studies to gather data. Five National Board Certified Teachers (NBCTs) were purposefully chosen, observed, and interviewed for this study. Five teachers who had not gone through the National Board Certification process were also purposefully chosen, observed, and interviewed. The observations and interviews were structured to determine how an identified set of best practices were incorporated into each classroom. The data gathered were used to attempt to answer the following questions: Are classroom practices of teachers with National Board Certification different from those without certification? Is National Board Certification indicative of a highly qualified teacher as demonstrated by their classroom practices?

Are classroom practices of teachers with National Board Certification different from those without certification?

Data on each of the 13 best practices identified by the research of Zemelman, Daniels and Hyde (1998) were gathered and reviewed to determine how they were used in the classrooms of 10 teachers, five NBCTs and five who had not participated in the process. Three categories were developed to categorize the verification of classroom practices in the observations. The categories were consistent evidence, evidence, and slight evidence. Consistent evidence required the practice to be observed at least three of the four days. Evidence required the practice to be observed two to three days and slight evidence meant it was observed at least once.

Analysis of the results provided evidence that in eight of the 13 practices there was a discernible difference between the two groups of teachers. In three practices there was a minor difference between the two groups while in two areas there was a negligible difference between the two groups. In 11 of the 13 practices the NBCTs were more consistent in their use of the best practices. Appendix R provides a graphic of how the individual teachers and the two groups compared on the 13 practices and emergent themes.

Best practices with discernible differences. A discernible difference occurred in the following practices: student-centered, experiential, holistic, authentic, reflective, social, cognitive, developmental, and challenging. Despite the fact that all 10 teachers stated their belief about the need for a student-centered classroom only seven teachers actually practiced this. The five NBCTs included student-centered activities on a consistent basis. None of the Non-Board Certified teachers consistently provided student-centered

activities. Two of these teachers did provide an opportunity for students to choose a book to read or a topic for writing.

Each of the teachers referred to the importance of manipulatives and hands-on learning for children. All five NBCTs used active, hands-on practices on a daily basis. Only three of the Non-Board Certified teachers used these practices consistently in their classrooms. Two provided limited access to manipulatives and provided only minimal opportunities for experiential learning during the observations.

Only one teacher mentioned holistic practice specifically, but the practice was in evidence in all five of the NBCTs' classrooms consistently. Instruction integrated several subjects rather than each treated as a separate entity. Two of the Non-Board Certified teachers demonstrated the holistic practice consistently while the evidence in another class was due to a holiday theme during the observation. Two of the Non-Board Certified teachers showed no evidence of holistic practice.

Although only three teachers mentioned authentic instruction during interviews there was some evidence of it in all 10 classrooms. The five NBCTs involved students in activities related to their lives on a regular basis especially during class discussions. Only two of the Non-Board Certified teachers manifested this practice in their classrooms. Three teachers made only passing references in class about how a topic might be related to the students' experiences.

No teacher referred to student reflection; however all five NBCTs used the practice consistently in their classrooms. Only one of the Non-Board Certified teachers demonstrated its use on a regular basis with four of them showing little or no evidence of student reflection in their classrooms.

All five NBCTs recognized the need for social interaction and provided opportunities for students to discuss ideas with their peers. The five Non-Board Certified teachers demonstrated a variety of opinions on social interaction. Two provided opportunities similar to the NBCTs. Three restricted student discussion and interaction despite the fact that one had stated she realized the need for students to be social.

Cognitive practices emphasizing higher order thinking skills were evident in all five NBCTs' classrooms. Each had planned activities that required her students to think and not respond with rote memory information. Only one of the Non-Board Certified teachers provided this type activity for her students. Three teachers did use some higher order questions, but without any consistency, and one only provided minimal opportunities for students to think for themselves.

While all 10 teachers used the most basic developmental practice of keeping lessons short in their classrooms, only six of them demonstrated an understanding of developmentally appropriate instruction. All five NBCTs demonstrated this understanding, but only one of them included a focus on differentiated work for individual students. One of the Non-Board Certified teachers demonstrated an understanding equal to the NBCTs' understanding using similar techniques while two showed some understanding. Two of them only had short lessons as evidence of developmentally appropriate practices.

A challenging environment was only in evidence in three of the NBCTs' classrooms where students had opportunities to investigate beyond the Content Standards. All five placed an emphasis on student responsibility as did all five of the Non-Board Certified

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teachers. There was no evidence of intellectual challenge in the classrooms of the non-certified teachers.

Best practices with minor differences.   A minor difference was evident in the practices of expressive and collaborative instruction. Although only one teacher expressed the need for students to have opportunities for expression in a variety of ways, the practice was evident in nine of the 10 classrooms. All five NBCTS incorporated expressive practices into classroom activities on a daily basis. Four of the Non-Board Certified teachers also provided opportunities with three of them doing so consistently and one occasionally.

Seven teachers said that collaborative practices were important in their classrooms, but only three teachers, two NBCTs and one Non-Board Certified, demonstrated practices that fit a strict interpretation of collaboration. Three other NBCTs and two other Non-Board Certified teachers incorporated limited collaborative practices into their instruction.

Best practices with negligible differences. There was little clear difference in democratic and constructivist practices in the 10 classrooms. A democratic classroom involves students in making choices and showing respect and all 10 teachers stressed the importance of respect for self and others in their classrooms. Student choice was evident in nine of the rooms on a consistent basis absent in one Non-Board Certified teacher's room. Two NBCTs allowed student input when developing classroom rules and one Non-Board Certified teacher developed the rules but allowed students to comment on them. All other classrooms had teacher developed rules with no student input.

Active engagement was evident in all five NBCTs' classrooms and in three of the Non-Board Certified teachers' classrooms; however, actual construction of knowledge or application of knowledge to a new situation was not apparent in any classroom. Three teachers, two NBCTs and one Non-Board Certified teacher, demonstrated a better understanding of constructivism, but were still in control of content and activities.

Emergent themes. Emergent themes were based on topics that emerged from the analysis of the descriptive narratives and included scaffolding, research, teacher reflection, modeling, and physical setting. Scaffolding used as an individual or small group accommodation for students was apparent in the five NBCTs' classrooms. It was not evident in the Non-Board Certified teachers' classrooms. Students received similar help regardless of ability or need.

There was a difference between the groups in respect to the role of research in their classroom decisions. Three NBCTs and two Non-Board Certified teachers considered research as an influence on their teaching practices. However, all five NBCTs were using practices based upon research while only two of the Non-Board Certified teachers actually used the practices they referred to during interviews.

Teacher reflection played a role in the teaching practices of three of the NBCTs and none of the Non-Board Certified teachers. Each of the NBCTs mentioned that reflection was emphasized in the certification process. The teachers who had not gone through the process did not refer to teacher reflection.

Teacher modeling was evident in four of the NBCTs' classrooms on a regular basis. Only two of the Non-Board Certified teachers consistently used modeling as an instructional strategy.

There was only a small difference in the physical setting of the classrooms which included placement of student and teacher desks and greeting students each morning. One teacher placed students in groups because she was told to do so and one teacher did not use groups at all. In three of the Non-Board Certified classrooms the teachers' desks appeared to be the focus of activity.

Is National Board Certification indicative of a highly qualified teacher as demonstrated by their classroom practices?

Analysis of the data showed that the NBCTs observed used the 13 best practices consistently in their classrooms. They also used modeling, personal reflection and scaffolding as instructional strategies. The data confirms that National Board Certified Teachers used research-based practices indicative of highly qualified teachers. These NBCTs put theory into practice in their classrooms.

CHAPTER SIX: SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

The education of children in America has been the cause of much debate and conflict. At the center of this debate is the need for quality teachers. The educational reform movement has emphasized teacher quality in the past and continues to do so with the No Child Left Behind legislation which requires a highly qualified teacher in every classroom. The mission of the National Board for Professional Teaching Standards is to advance the quality of teaching and learning by recognizing accomplished teaching (NBPTS, n.d.). Although the certification process includes standards-based performance assessments, specific classroom practices are not directly addressed in the national certification process (Berg, 2003). An in-depth review of the literature by Zemelman, Daniels, and Hyde (1998) identified 13 practices that characterize a model classroom using the standards and recommendations from the National Council of Teachers of Mathematics (NCTM), the National Council of Teachers of English (NCTE), the National Science Teachers Association (NSTA), the National Council for Social Studies (NCSS), and the International Reading Association (IRA).

The purpose of this study was to examine and compare the classroom practices of teachers in West Virginia, those with National Board Certification and those who have not gone through the certification process, but are considered to be highly qualified.   The following research questions were addressed:

1. Are classroom practices of teachers with National Board Certification different from those without certification?

2. Is National Board Certification truly indicative of a highly qualified teacher as demonstrated by their classroom practices?

The purpose of this chapter is to briefly review the procedures and findings and state the conclusions and implications of the study. Recommendations for further study resulting from the conclusions are presented.

Summary of Procedures

This study was a multi-site, qualitative descriptive and evaluative case study. It incorporated observations, interviews, and a checklist to generate qualitative data analysis. This study focused on classroom practices of 10 teachers to examine the potential relationship between the National Board Certification process and the 13 best practices identified through literature. The researcher observed the classrooms of each of the 10 teachers chosen for the study and interviewed them on the third or fourth day of the observation. Classroom practices of teachers who had successfully completed the process were compared to the classroom practices of teachers who had not completed the National Board Certification process.

Summary of Findings

Analysis of the results provided evidence that in 11 of the 13 best practices there was a discernible difference between the two groups of teachers. There was a negligible difference in the democratic and constructivist practices of the 10 teachers. Emergent themes included scaffolding, research, teacher reflection, modeling, and physical setting. In all but the physical setting NBCTs' classrooms provided more consistent evidence of these practices. Analysis of the data showed that NBCTs used these practices more consistently than their counterparts. Based upon the evidence that in 11 of 13 classroom

practices and four emerging themes there is a difference between National Board

Certified Teachers and Non-Board Certified Teachers. It appears that National Board

Certification is indicative of a highly qualified teacher as evidenced by their classroom

practices.

Conclusions

The findings for this study support the following conclusions. First, extensive

research has been done on instructional strategies and classroom practices that create a

more effective classroom (Berends, 2004; Fullan & Rolheiser, 2002; Minner, 2001;

Walberg & Paik, 2004; Zemelman, Daniels, & Hyde, 1998). Zemelman, Daniels, and

Hyde (1998) took much of this research as well as the standards of the content oriented

professional organizations and synthesized it to develop a list of best classroom practices.

Berg (2003) maintained that NBCTs are better for students, are well-trained, able to

change the culture of mediocrity, and their research-based practices increase the quality

of learning experiences for children. This research study revealed that teachers with

National Board Certification used more of the identified13 best practices consistently

than did teachers without the certification. This affirms the literature on NBCTs and their

use of research-based practices.

Second, studies by Berends (2004), Fullan and Rollheiser (2002) and Stronge and

Hindeman (2003) indicated that learning should be student-centered and incorporate

activities linked to student interests. Busatto (2004) found the factors that made a

difference in student achievement in numeracy at the primary level included hands-on

materials and student interaction with teachers and peers. The majority of teachers in this

study recognized the importance of student-centered, experiential learning using

developmental practices and creating a social classroom. However, these practices were

only consistently in place in the five NBCT classrooms and in one without the

certification. This leads to the conclusion that teachers know what practices they should

be using, but do not always follow through with the practices. These practices are

embedded in Early Childhood Generalist Standards One, Four, Five and Six (NBPTS,

2001) thus this study reinforces the NBPTS stand that the certification process makes an

impact on teaching practices. This study verifies the literature on the importance of

experiential learning opportunities by demonstrating that teachers considered to be highly

qualified incorporate it into their classroom practices.

Third, one of the most prominent findings of a study by Tracz, Daughtry, Henderson-

Sparks, Newman and Sienty (2005) was that after the NBCT process teachers spent more

time reflecting on their practices and focusing on their students to plan instruction. The

results of Unrath's (2002) study demonstrated that reflective thinking was both a catalyst

and a consequence of the certification process. Standard Nine, Teachers Reflective

Practice, (NBPTS, 2001) impacted the practices of three NBCTs in this study as

evidenced by their interviews while not one of the Non-Board Certified teachers

mentioned reflection in their personal practices. Comments by NBCTs support this: "The

process did not affect my practices but taught me to reflect on ways to improve

instruction," "the reflection part changed me," and "I've always been reflective but I'm

more formally reflective, thinking about a different way, a different strategy." The

conclusion is that the National Board Certification process made a difference in reflective

practices which confirms the findings of Clehouse (2000) that NBCTs felt they and their

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students incorporated more reflective analysis and critical thinking into their learning since completing the National Board process.

Holland (2002) criticized the repeated warning of the NBPTS process to pay attention to only NBPTS standards. However, this study substantiated that paying attention to NBPTS standards means providing instruction that uses best practices and does not detract from effective teaching.

Fourth, studies have shown that there should be an emphasis on the production, not reproduction, of knowledge through in-depth thinking and reflective discussion (Berends, 2004; Brophy & Good, 1986; National Council for Social Studies, n.d.c; Stronge & Hindeman, 2003). Student reflection is embedded in NBPTS Standard Six and in this study it was evidenced in all five NBCTs' classrooms consistently, but only one Non-Board Certified teacher's classroom. One of the teachers referred to research on reflection and discussion, "children need to talk about what they've learned about in order to internalize things." The inference drawn from this is that NBCTs were more aware of the impact of student reflection on student achievement which affirms the research on effective teaching.

Fifth, Bond, Smith, and Baker (2000) investigated student achievement and identified attributes of exemplary teaching. Included in these attributes were problem-solving and challenge both in evidence in all five NBCT classrooms but only one Non-Board Certified teacher on a consistent basis. Strong and Hindeman's study (2003) identified problem-solving and implementation as key attributes of effective teachers. The five NBCTs demonstrated an understanding of cognitive and challenging practices, which by definition include problem-solving, while only one Non-Board Certified

teacher provided evidence of cognitive practices.   One NBCT said "I try to make them independent thinkers" while another stated she "liked to ask questions and pull information from them." A non-certified teacher stated she tried to "ask what do you think and make predictions" while children read. The opposite view is evidenced by the teacher who maintains she is successful because her students are "more prepared because they've learned to copy from the board and they've learned to copy from the book." The NBCTs in this study were more effective in implementing challenging and cognitive instruction supporting the research of Bond, Smith, and Baker (2000) regarding exemplary teachers.

Sixth, research by Busatto (2004) and Stronge and Hindeman (2003) verified that differentiation and scaffolding were strategies that were used by effective teachers. Developmentally appropriate practice was evidenced in the five NBCTs' classrooms with one demonstrating a true understanding of differentiation while the other four had some slight evidence of it. None of the Non-Board Certified teachers established this understanding of differentiation. Scaffolding is often described as a piece of developmentally appropriate practice and was consistently evidenced in the five NBCTs' classrooms with little or no evidence in the Non-Board Certified teachers' classrooms. NBCTs used more of these effective practices than their counterparts validating the research that NBCTs are effective teachers.

Seventh, one of the main issues in education is that all students need high quality, effective teachers to make maximum achievement gains and reach high standards (Darling-Hammond, 1997; Finn, 2003; Goldhaber, 2002). In researching teacher effectiveness, Darling-Hammond (1999) found a consistent result: there is a positive

relationship between teachers and achievement when the teachers use a range of strategies and interaction styles rather than one single approach. The evidence presented in this study concludes that the five NBCTs used best practices more consistently than those without the certification. These best practices reflected a variety of strategies including differentiation, problem-solving, questioning, reflection, scaffolding, flexible grouping, hands-on materials, interaction between teacher and students and students and peers, collaborative practices, and student-centered (Berends, 2004; Bond, Baker, & Smith, 2000; Busatto, 2004; Hardiman, 2001; Protheroe, Lewis, & Paik, 2002; Stronge & Hindeman, 2003; Unrath, 2002). The conclusion is that NBCTs are effective teachers according to the Darling-Hammond (1997) study and it affirms the research on effective practices.

Eighth, Podgursky (2001d) was critical of the entire NBPTS process and argued that at its best the National Board Certification tells the public that the teacher knows how to be a good teacher, but does not prove they put the theory into practice. In opposition to Podgursky, this study provided evidence that NBCTs do indeed put theory into practice in their classrooms.

Ninth, the No Child Left Behind legislation defined a highly qualified teacher as one who holds a minimum of a bachelors degree, has obtained full state certification or licensure and has passed a rigorous state test to demonstrate competency in the academic subject taught (Joftus, 2002). For experienced teachers to prove this academic competency, each state constructs its own High Objective Uniform State Standard of Evaluation, or HOUSSE plan to assess a teacher's content knowledge (Walsh & Snyder, 2004). West Virginia's HOUSSE plan recognizes highly qualified teachers as those who

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have attained National Board Certification, those who have successfully completed the appropriate PRAXIS assessment, or those who have satisfactory yearly evaluations as per West Virginia's evaluation system (Walsh & Snyder, 2004). This study provided evidence that although the NBCTs and Non-Board Certified teachers were all considered highly qualified by this definition, they did not all use best practices in their instruction as substantiated by the matrix in Appendix R. Only one of the Non-Board Certified teachers and the five NBCTs consistently applied the practices of effective teachers. The results of this study refute the assertion that National Board Certification and satisfactory evaluations are equivalent indications of highly qualified teachers.

The teachers involved in this study varied in years of overall experience and experience at their present grade level. There appeared to be no pattern to experience as related to the use of best practices. This is true for degree level as well. The NBCT with a bachelor's degree consistently exhibited as many best practices as the others with a master's degree and more so than the non-certified teachers who all had masters degrees. Therefore degree level and experience are not related to the use of best practices.

When comparing the statements made during the interviews with the data from the observations, the data did not always coincide. Teachers expressed a belief in certain practices but did not always put their beliefs into practice during the observations. This affirms the decision to use a qualitative type study rather than a quantitative one that would have relied upon teachers' perceptions of which practices they use in their classrooms.

National Board Certification is intended to be a path to professional growth and development (NBPTS, 2004c). Sato (2000) investigated the learning that takes place and

the intellectual growth fostered by the certification process. He concluded that the process had potential to contribute to teacher learning through professional development. One Board Certified Teacher in this study commented, "Many of my teaching practices have changed, but mostly due to trainings in the county. These opportunities played an important role in the certification process since they taught me the terminology needed to be a successful applicant." Another stated "I learned a lot about classroom community and improving children's reading with certain techniques." Another said, "The reflection part changed me. It changed how I approached things. The thought that they can learn from each other and letting them share their writing. I learned about peer teaching and learning and modeling." Another found that she did "a lot more of group type things where they work together and I let them make more decisions." The fifth said "I was already on the road, but probably exposure to Bloom's Taxonomy was the biggest thing; redesigning the lessons with a particular focus in mind, scaffolding." Each of these teachers gained knowledge about classroom practices through the certification process that helped her become a better teacher. It appears that the National Board Certification process is a path to professional growth and development.

Implications

Professional development is a requirement for every teacher in public schools across the country and the National Board Certification process is intended to be a form of professional development for teachers. This study has shown that it was indeed a path for professional growth and development for five teachers in West Virginia. However, one of the non-certified teachers had pursued several opportunities for professional development through her county system and demonstrated consistent evidence of nine of

the 13 practices and evidence of the other four. This was only slightly less than the five

NBCTs in the study. This implies that professional development on these 13 best

practices could be offered in a different manner. Bullough, Burbank, Gess-Newsome,

Kaucheck, and Kennedy (1998) presented a similar argument in their research stating that

if the NBPTS certification process is for professional development then there are less

expensive ways of doing it.

This professional development would require the support of the administrations in

each county especially in leading personnel to an awareness of the best practices prior to

offering them as professional development. Counties need information on the National

Board process, the embedded practices in each standard, and the research on best

practices for effective teachers. Once awareness is ascertained the counties can proceed

with plans for professional development that would provide teachers with the information

to be effective teachers who know, understand and use these best practices.

This leads to the proposed legislation in West Virginia that would allow professional

development in lieu of semester hours for certificate renewal. If West Virginia is going

to replace semester hours with professional development it must be on a level equal to

that of the National Board Certification process to produce effective teachers. A

professional development program based upon the embedded practices of the NBPTS

Standards and the research by Zemelman, Daniels, and Hyde (1998) would provide

teachers with research based practices to use in their classrooms and assist in developing

more highly qualified and effective teachers. Once again, this can only occur if the

administrations in each county are willing to provide the time and money necessary for

teachers to internalize these practices. Then it will require follow-up with observations to

see that the practices are being implemented and further opportunities to reflect and review how the practices are working in the classrooms.

As the latest in a long line of educational reform movements, No Child Left Behind legislation has affected all areas of the education process. One of the main elements of this legislation is the assurance that there will be a highly qualified teacher in every classroom. Teachers who achieve certification from the National Board for Professional Teaching Standards automatically meet the definition of highly qualified as defined by state guidelines. This study highlighted the differences between teachers with the certification and those without and with only one exception, it demonstrated that satisfactory evaluations were not the equivalent of National Board Certification for the designation of a highly qualified teacher. This study provided evidence that NBCTs are highly qualified. The evidence provided for teachers without the certification leads to the question of whether or not they are actually highly qualified or only judged so due to the minimal definition West Virginia and other states use under the High Objective Uniform State Standard of Evaluation or HOUSSE plan. This definition of highly qualified needs to be revisited by West Virginia and other states so that teachers earn the designation of highly qualified through evidence of their classroom practices.

This study has implications for teacher education programs as well. The extensive research completed by Zemelman, Daniels, and Hyde (1998) in developing a list of best practices and the National Board for Professional Teaching Standards in the creation of their standards and embedded practices should be utilized in teacher education programs. If the goal is to have highly qualified teachers and these are the practices that are most effective in the classroom, and National Board Certified Teachers use these practices

more consistently than do others, then it follows that new teachers should understand and be able to use these practices in their classrooms. It is the responsibility of teacher education institutions to provide the knowledge and importance of these best practices in their teacher education programs. Alignment of the NBPTS Standards and best practices with the requirements of the teacher education program would benefit all students.

Recommendations for Further Study

Based upon the findings from this research, further study is recommended in the following areas:

1. This study was confined to teachers in only first and second grades. Although the 13 best practices are intended for every grade level, there may be a difference in their application at higher grade levels. When working with the high school level it may be necessary to work with only one subject area to see if NBCTs and teachers without the certification use these practices in different ways. Therefore it is recommended that this study be replicated at different grade levels to determine if there are similar results with teachers of older students.

2. Each state has the responsibility to determine the definition for highly qualified teachers under the HOUSSE section of No Child Left Behind. Because of this a comparison of teachers who are considered highly qualified in another state may differ from this one in West Virginia. It is recommended that this study be replicated in different states, especially those with different HOUSSE designations for highly qualified teachers, to determine if that makes a difference in the findings.

3. One non-certified teacher exhibited many of the same characteristics as the NBCTs. The professional development available in her county provided her opportunities to learn about many of the best practices embedded in the NBPTS process. It is recommended that further research be done to explore the professional development opportunities available in counties in West Virginia to determine the similarities with the National Board Certification process.

4. With this growing emphasis on highly qualified teachers, the teacher education programs need to offer students the opportunity to become knowledgeable about these best practices and the National Board process. It is recommended that further study into these teacher education programs be done to provide information on which ones are using and teaching best practices and which ones are lacking in that information.

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APPENDICES

Appendix A: Comparison of Practices

Appendix B: Informed Consent

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Appendix D: Superintendent Letter

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Appendix H: Interview – NBCT Number One

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Appendix L: Interview - NBCT Number Five

Appendix M: Interview – Non-Board Certified Teacher Number One

Appendix N: Interview – Non-Board Certified Teacher Number Two

Appendix O: Interview – Non-Board Certified Teacher Number Three

Appendix P: Interview – Non-Board Certified Teacher Number Four

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Appendix R: Practices and Themes Matrix

APPENDIX A: COMPARISON OF PRACTICES

COMPARISON OF PRACTICES

Best Classroom Practices as identified by Zemelman, Daniels, & Hyde Research	Practices found in the Early Childhood Generalist Standards of NBPTS	Corresponding Standard
Student-centered	response to unique needs/potential	I
	guided discovery	I
	knowledge of student	I
Experiential	variety of activities in multiple ways	I
	opportunities for movement	IV
	create engaging learning environment	IV
	understand importance of exploration, investigation, inquiry	V
	engaging learning experiences	VI
Holistic	integrate within & across disciplines	V
	Use literacy to integrate learning	IV
	employ integrated teaching	V
	develop social knowledge about learning in groups	IV
Authentic	promote meaningful learning	VI
	create meaningful learning experiences	IV
	build foundation for real world learning	V
	model learning as an authentic activity	V
Expressive	opportunities for creative expression	I
	practice effective communication	II
	opportunities for movement	IV
	opportunities to make sense of world & knowledge with dramatic play & role play	IV
	teach communication as an essential skill	IV
	variety of opportunities to use oral & written expression	IV
Reflective	help develop strategies to reflect on experiences	IV
	challenge to reflect on responses	VI
Social	social cooperation	VI
	social aspects essential to learning	I
	encourage interaction	I
	Use play to develop social skills & interactions	IV
	foster social responses	IV
	recognize importance of social interaction	V
Collaborative	promote social cooperation	IV & VI
	opportunities to practice teamwork & cooperation	II
	develop social knowledge about learning in groups	IV
	Use discussions to create communities of learners	V
	develop discussion skills	VI
	opportunities for flexible grouping	VI

Democratic	treat children with dignity, respect, equity, & fairness	II
	equitable participation	II
	promote cohesiveness	II
	opportunities to make choices	IV
	create & determine codes of conduct	V
	envision role as a citizen	V
Cognitive	enrich understanding & problem-solving	IV
	engage in activities built on prior knowledge	IV
	construct new knowledge	IV
	value & model thinking, reading, & discourse as valuable	IV
	think & reason mathematically	V
	model strategies - hypothesize, synthesize, organize	VI
Developmental	promote development & knowledge	I & IV
	recognize students learn - different ways & rates	I
	materials & resources appropriate for needs	IV
Constructivist	guided discovery	I
	building on interests & questions of children	II
	stimulate discovery	IV
	choose tasks built on inquiry	IV
	opportunities to select own topics & materials	VI
	Key into children's interests	IV
	set up learning experiences guided by interests	VI
Challenging	practice skills beyond mastery level	I
	challenge to advance	II
	high expectations	IV
	create challenging learning experiences	IV
	higher level thinking skills	IV
	set ambitious expectations	IV
	promote thinking, encourage conceptual development, develop problem-solving abilities	VI

APPENDIX B: INFORMED CONSENT

Marshall University Graduate College
100 Angus E. Peyton Drive
South Charleston, WV 25303-1600

Phone: 304-746-1949
Email: hollandswor3@marshall.edu

August 23, 2005

Dear (First or Second Grade Teacher),

   I am a doctoral student at Marshall University and am conducting research on best classroom practices in West Virginia classrooms, focusing on Highly Qualified Teachers. In order to accomplish this I need the assistance of teachers in grades one and two. If you are no longer teaching at this level, please pass this letter on to a colleague who fits this description.

   Participation in this research project would mean that I would observe your classroom for a period of four days. During these observations, I would be noting the various classroom practices occurring in the classroom. At the end of the observations, an interview would take place for clarification and discussion of the events of these four days. No names will be used in the notes or the research report and all mention of the classes and teachers will be coded to ensure anonymity.

   If you choose to participate in this project, please fill out the form that is included with this letter. Your name will be put on the list of willing participants. Not everyone who agrees to participate will be observed since names will be drawn randomly from those who return their forms. You will be notified as soon as possible concerning your status as a participant.

   If you have any questions or concerns about this project, please contact me to discuss it in more detail. Be assured that no observations will occur without the permission of the teacher involved, the school administration, and the county administration.

   Thank you in advance for taking the time to complete the enclosed form and for being willing to participate in this study. I appreciate you taking the time to read this and hope to hear from you soon.

Sincerely,

Sue Hollandsworth

APPENDIX C: RETURN FORM

Name _____

School _____

County _____

Address _____

_____

Grade Level _____

National Board Certification: No _____

Never Applied _____

Yes _____   Year _____

Degree Level _____

Years of Experience: At this level _____

Overall _____

Highly Qualified Teacher: (check all that apply)

Met standards on evaluations ____

Masters/Doctorate in Elementary Ed ____

Praxis test ____

APPENDIX D: SUPERINTENDENT LETTER

Marshall University Graduate College
100 Angus E. Peyton Drive
South Charleston, WV 25303-1600

Phone: 304-746-1949
Email: hollandswor3@marshall.edu

September 8, 2005

Dear ,

    This is a follow-up to our telephone conversation about observations of two teachers in your school system. I am a doctoral student at Marshall University and am conducting research on best classroom practices in West Virginia classrooms. In order to accomplish this I need to observe teachers in their classroom settings. Mrs. XX , first grade teacher at YY Elementary School has agreed to participate in this study.

    The observations will be done during a four day period with the interview to follow at a time mutually agreed upon. The observations will be unobtrusive to the class and will consist of me sitting in the room taking notes on what is happening during each day. No names will be used on the notes or in the completed research and no students will be contacted.

    This letter confirms our conversation and your agreement to allow these observations pending approval of the school principal.

    Results of the study will be made available to participating teachers and to you as well, if you are interested. If you have any questions or concerns about this study, please contact me to discuss it in more detail.

Sincerely,

Sue Hollandsworth

APPENDIX E: PRINCIPAL LETTER

Marshall University Graduate College
100 Angus E. Peyton Drive
South Charleston, WV 25303-1600

Phone: 304-746-1949
Email: hollandswor3@marshall.edu

September 8, 2005

Dear ,

   This is a follow-up to our telephone conversation about observing Mrs. XX , first
grade teacher at YY Elementary School. I am a doctoral student at Marshall University
and am conducting research on best classroom practices in West Virginia classrooms. In
order to accomplish this I need to observe teachers in their classroom settings. Mrs. XX
has agreed to participate in this study.

   The observations will be done during a four day period with the interview to follow
at a time
mutually agreed upon. The observations will be unobtrusive to the class and will consist
of me sitting in the room taking notes on what is happening during each day. No names
will be used on the notes or in the completed research and no students will be contacted.

   This letter confirms our conversation and your agreement to allow this observation.

   Results of the study will be made available to participating teachers and to you as
well, if you are interested. If you have any questions or concerns about this study, please
contact me to discuss it in more detail.

Sincerely,

Sue Hollandsworth

APPENDIX F: THANK YOU

Marshall University Graduate College
100 Angus E. Peyton Drive
South Charleston, WV 25303-1600

Phone: 304-746-1949
Email: hollandswor3@marshall.edu

September 10, 2005

Dear (Teacher),

    Thank you for agreeing to participate in the research study on best classroom
practices.   Your name was not chosen during the random selection process. However, if
you would be interested in reading the results of this study, I will be happy to send them
to you. Simply email me notifying me of your wishes and I will send the results when
they are completed.

Thank you again for your willingness to participate.

Sincerely,

Sue Hollandsworth

APPENDIX G: INTERVIEW QUESTIONS

1. What procedure did you follow to develop your classroom rules?

2. Is this typical of your classroom arrangement?

3. What are your expectations as far as noise level in your classroom?

4. How do you determine the instructional strategy (practice) you will use for an activity?

5. Why did you use (collaboration, hands-on, etc.) during the activity on X?

6. Have your teaching practices changed since you started?

7. How and/or why?

8. What has changed about your teaching due to the certification process?

9. Why do you teach the way you do? What are some of the influences?

10. Who or what do you feel influenced your teaching the most?

11. Why and/or how?

12. Please share your philosophy of education as it relates to your classroom practices.

APPENDIX H: INTERVIEW – NBCT NUMBER ONE

During the interview the teacher and I discussed her room arrangement, teaching

practices, influences on her teaching, and her philosophy of education. The interview

took place during the teacher's planning time on the third day of the observation.

Question: Is this typical of your classroom arrangement?

The room is arranged for centers, giving students different areas to work in with the

tables used to facilitate teamwork. The computers need to be where they are for hookups

and the carpet area is good for group meetings and is used regularly.

Question: What are your expectations as far as noise level in your classroom?

The noise level varies with activities. Sometimes they need to be quiet and listen

while at other times they talk and share with each other.

Question: How do you determine the instructional strategy (practice) you will use for an

activity?

Activities are determined based on my knowledge of the students and their needs. I

used to choose them because they were in the book, cute, or I thought students might like

them. I am more careful in my choices now.

Question: Why do you teach the way that you do?

I teach very hands on, and I think the main influence is because I teach in a lower

level school (Title I). I was so lucky the way I grew up – overly loved and that's why I

use a lot of praise because I don't think they get enough of that at home and so I use a lot

of praise in my teaching and I try to make it positive teaching and not negative teaching,

at least that's what I hope I do. Trying to make them pleased with themselves and build a

positive self-image.

Question: Would you do anything differently if you were in an affluent school?

I don't think so. I don't think they would receive me the same way – students could have conceited attitude – not caring about a cookie or sticker. I think I am needed with this type of child. Parents would scrutinize me more and I would find it hard on me. I'm too high strung for that.

Question: Have your teaching practices changed since you started? How and/or why?

Many of my teaching practices have changed since I started, but mostly due to trainings that the county makes available to teachers. I feel these opportunities played an important role in the certification process since they had taught me the terminology needed to be a successful applicant. I am doing the same things as before and during the certification process. The process did not affect my practices but taught me to reflect on ways to improve instruction – the need for a change. I don't feel my actual practices have changed at all – I am just looking more closely at why I am doing certain things. Reflection has made a major difference. It played no role before, but now plays a major and most important role. It has made me realize the impact of what I am doing on the students. I feel I know my students better than before. I look at each one more carefully – assessing where they are and what their needs are.

Question: Who or what do you feel influenced your teaching the most?

I think that would be the students and the fact that I teach in needy schools. There are things here that are frightening and sad at the same time and I have to adapt to them. When I changed the color of an apple for discipline as I did before, I would send home a note after three changes. Then I realized one child was getting the tar beat out of her at home because of it so I adapted and we had our own plan. Whatever the students need and whatever works best for them is what I do.

Question: Please share your philosophy of education as it relates to your classroom practices.

I believe that I am here for them and only them, I am not here for the office I'm not here for what the office needs; I am here for the children. If I have to give up my planning period because one of the children needs me, then that's my job, my job is the children. Just like they say the principal's job is the staff, my job is my children. My philosophy is just that I am here for the children and I have to give them 150% of whatever I can. It is not a very educated way to state a philosophy but that's just it, I'm here for them. I have always wanted to do this since my first day in kindergarten – I wanted to be the lady with the big desk and all the markers one day; this is what I want.

APPENDIX I: INTERVIEW – NBCT NUMBER TWO

Question: What procedure did you follow to develop your classroom rules?

The first three days of school – I use a lot of what I learned at my Quest training about developing school rules. We talk a lot about rules they've had in the past and rules that work, you know, how to make it a learning environment. They developed the rules themselves. We do a brainstorming thing where I write down all the things that they talk about and then we break together in their groups and I give them sticky notes and I tell them to write down what you think is the most important rule that we talked about. And since we have the brainstorming stuff all over the board they can pick what they think is the most important so that prioritizes them and I show them how some of them have the same rules so that becomes the most important. Well, rule number one I make up and that is: do what the teacher says the first time she says it, but then the rest of them came from them. And we combine as they have different ways of wording rules so don't push, don't hit, all of that got combined into keep your body parts to yourself. It is a process and then I have them sign an "I promise to do the best job that I can to follow these rules" and when they are consistently breaking a rule I'll pull out their I promise thing and I'll say that is your signature that says you promised you would do a good job and I really think you are a man or woman of your word and I really think you are breaking your promise. And I haven't had to do that this year because these kids are just so well behaved. Last year's group I had to pull that out a couple of times, but most of the time that works really well. They take ownership of the rules and that is very important. It works very well.

Question: Is this typical of your classroom arrangement?

I like for them to sit at tables. Number one we need the tables themselves for our centers because this room doesn't have extra room for tables at center time.   Once they get into the procedure of center time I will be pulling kids from their groups to work with them at this table. I needed the tables first of all and that way they've got partners and sometimes I'll say use your elbow partner or use your eyeball partner. Then sometimes I put them with partners if I have a specific goal in mind, like if we are working on fluency I will partner someone who is a really good reader with someone who is a slightly poorer reader so that the good reader who reads with lots of expression and smoothly can be a role model for the one who is not. I still am learning about the kids and seeing what they are capable of. The first couple of weeks of school some of the ones who didn't do any kind of reading at home over the summer, it takes them awhile to get back in and oriented so they may have started out at the beginning of the year not being able to read hardly at all, but now after doing it a couple of weeks it starts coming back to them so the ones who are having trouble at the beginning are not necessarily the ones who are going to have problems, it's just the fact that they didn't practice over the summertime. But basically this is it.

Question: What are your expectations as far as noise level in your classroom?

I can handle a certain amount of noise level except for when I am talking or when someone else is talking, I feel they have to be good listeners and focus on the person who is talking. I spent 12 years in kindergarten; I can handle quite a bit of noise level. As long as, what I do is I look around and see if the children are able to focus on their task. If it is so noisy that they cannot focus on their task or I cannot focus on my task then we try to get the noise level down. That hasn't really been much of a problem with this

group. That was a big problem last year. We had to work on that a lot last year; in fact we even had a noise level chart for awhile.

But as far as noise we are trying to be a little quieter walking back to our desks. I'm not picky about stuff like that. That's not hurting anybody, if someone has something to talk about on the way back to their desk what's the big deal. I know that when they go on to other teachers they have different expectations; that's tough. Anyway, I can handle a certain amount of noise and after so many years in kindergarten you get the, you sort of know about the noise – who's goofing off here and who's actually on task. I mean we don't always catch it, but most of the time I can tell if they're on task. Research says children need to talk about what they've learned about in order to internalize things so how – if you have a no noise level in your classroom, how are they going to talk about these things? Well, that's my philosophy.

Question: How do you determine the instructional strategy (practice) you will use for an activity?

I really look at the skill that I'm trying to get across and then I look at the kids' needs. This group is different from my last year's group. Last year's group did not need so much of the phonics, the vocabulary came like that to them, they were really, really good readers. This year's group is going to need more practice, more phonics; they're going to need more repetition of things. I really just kind of look at the group and see how well they are doing with the skill that's expected. We really do use the CSOs (Content Standard Objectives). Have you ever seen our prioritized curriculum? This is our newest, a prioritized curriculum for the social studies, this is our reading and language and this is our math. Then it's organized by grade level and it tells the things

we are supposed to put more emphasis on. The math was written for our old textbook and now that we have the Investigations they said we didn't have to strictly adhere to it, just kind of use it as a guide – are we covering these things? It's just a guideline, not something you have to stick with, you have to know your group, but it does take the CSOs and organize them with key concepts and key vocabulary to work on. I use the concept map as my basis for the content we are going to be working on and then I adapt it to my kids.

Question: Have your teaching practices changed since you started?

YES! Wow, I wish I had some of those groups I had – my third year I had a really tough group. I only had 15 of them but 9 of the 15 ended up in a special education class. So I wish I'd had some of the experience I've had with working with special education. When I was working with that group, although looking back it's a lot of the matter of repetition and approaching things in a different way, getting to all the different learning styles and even though I couldn't have talked about that then I had this innate feeling that that's what we were supposed to be doing so I did a lot of that.

Yes, I used to do the worksheets, when I taught first grade when they walked in the door they'd have 2 or 3 worksheets on their desks and we'd start out the day like that. And then little by little, especially in math, it started in math. I found that they just needed hands-on activities so I started to use PTA money to buy manipulatives. We didn't have very many manipulatives, we had those rods, those Cuisenaire rods, and I'd use them as counters. So I just started sharing all the ideas that we could to try to have a hands-on math program instead of all the worksheets and we sort of developed that together. So it started in math and I went to an early childhood workshop one time and

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the teacher said, I look at a worksheet and I think how can I do that with hands-on materials? Then I started applying it to reading too, trying to use more flash cards and thumbs up, thumbs down, and dry erase boards, chalkboards. Yes, it is very much evolved.

I promised myself I would stay on top of new things and I would try new things and I have. I have stuck to that because sometimes, new things will work for one class and not for another. I found things that work for me, but there are so many new things that do work, you just keep building on that. That was my number one reason for doing the NBC – it was just another way to learn. Everything I read said you will never do anything better for staff development or self-development than going through that process and they were right too. So, that's why I went through the process, but I do enjoy the extra money. Some people just do it for the money and I don't see how they can qualify. I think that might have been their priority going into it, but after getting in to it, they had to have some other motivation other than the money otherwise they wouldn't have put all that work into it just for the money.

Question: What has changed about your teaching due to the certification process?

I do not have a master's degree in reading, my master's degree is in early childhood and I really learned a lot about reading techniques, especially for higher level. I had always been in first grade or kindergarten and when I went through the NBC process I was in kindergarten. So I did a lot of reading about improving children's reading with certain reading techniques, but I had not really had this so that has been very helpful in teaching second grade because with the NBC I could have had questions on things up to 3rd grade. So I needed to know. I had borrowed books from people who had worked on

their master's degree in reading the year before so I read lots and lots of books. I learned a lot more about classroom community and that's what I got my 4 on, the classroom community portfolio, about developing a classroom community. Having them do their rules and talking about problems that arise. Sometimes I put the problem out to them and ask what they think they should do about it. Today we didn't have the time for that, time is a problem. We don't have time for a morning meeting, there are so many things to work on, but classroom community was something I really learned a great deal about - those two things, reading and classroom community.

Question: Who or what do you feel influenced your teaching the most?

Research and other teachers – when I taught first grade we had what we called the First Grade Only Group and we met once a month and would share ideas. I learned so much – some of those teachers are still teaching in the system now and I just learned so much from them. Some of them would go off to national workshops and stuff like that and they would come back and share ideas or they would just happen upon something that worked in the classroom and that was very helpful. When I went to another school the other teacher was very hands-on, developmentally appropriate; a little more rigid about some things but very hands-on so I got most of my kindergarten ideas from her. Then when I went to another school, I taught next door to another teacher who was very developmentally appropriate and we exchanged ideas all the time and we went through the National Board process together. So I would say ideas from other people and research.

Question: Please share your philosophy of education as it relates to your classroom practices.

I really believe that all children can learn even the slowest ones, but everybody learns at a different level. I really do believe that everybody has a different learning style and it takes me a long time to get to know an individual child and how to reach their learning style. I just think of education as this set of steps and there are children who race up those steps and then there are children who go up those steps a little slower, but I really feel that it is our job as educators to finally get them to the top of those steps in whatever way we need to, even if we need to get them and drag them up the steps kicking and screaming along the way. That's our job; everybody goes up the steps in a different way. I spend a lot of time trying to figure out the particular way that child is going to get up those steps. You know some children have a lot of support at home; some children have no support at home so if they have supportive parents I bring them in. So I just try to find what works with that particular child and not just with the ones that need help either, because last year I had a lot of gifted kids. One of the most complimentary things I ever had a parent say to me was during parent conferences at the end of the year. She was mother of my top student and I asked why she had come in for a conference. She said she wanted to tell me that this was the first year her daughter had ever really learned anything because you managed to reach the higher-level children while you reached the lower-level children. So, that's my philosophy.

APPENDIX J: INTERVIEW – NBCT NUMBER THREE

Question: What procedure did you follow to develop your classroom rules?

Our Promise to Each Other is the basis for our classroom rules. It was developed according to Debbie Miller's book *Reading with Meaning*. I just adapted her promise out of her book and we usually do it each morning, refer back to it occasionally. I try so much to make this a big happy family. There are kids that are so very sociable, so nurtured at home, that have so much and then there's the little ones who don't have anything. I've seen that a kind of kid become the scapegoats and no matter what happens they get blamed. If that happens later on, I just don't want it to happen this year. One more good year with everyone being one big happy family and once it gets started there's not much you can do about it. So, basically this is a nice bunch of kids. So far this is a good year, they're loved and socially they're nice. We just need to get Ms. Ringleader to learn she is one of the family. I have had years when it's all chiefs and no Indians and that's tough when everybody wants to tell everybody what to do. I had a sixth grade class one time that by the time they got to sixth grade they had decided that no one in the class knew anything except Ethan and if they needed to know anything they'd just ask Ethan. There was a little boy knew nothing and he didn't expect to know anything, he was dumb and he didn't need to know anything. He had chosen this – they had come clear through sixth grade with that attitude.

Question: Is this typical of your classroom arrangement?

I move them; I'm always in search of the perfect arrangement. I like the cubes, I like the groupings, and I'm constantly moving somebody and I meant to move one this morning. I move one or two at least every couple days to keep them mixed and I try to keep them with a couple of highs, a low and middle in every grouping to do that. I've got

one isolated here in front of me because academically he's very low and he's very distractible and I put him with M so he could be M's helper so that he feels good so that he can help somebody but he's also focused with me. But, yes, I've moved them around and I've had different pods in different ways in my room but this is usually close to what it will be – I'll do it sometimes for a change in Ls or Us, I never do rows. I also did one great big long strip but the janitors ask me not to do that because it is hard to clean, but I'll probably do that at least once this year. I've done a long row and a long row – they can't stay in rows – if they are not bumped up against something they just keep moving the desks forward – they gravitate toward me. This way they have their peers and a higher and a lower and I try to match personality a little bit. This is how we are most of the time.

Question: What are your expectations as far as noise level in your classroom?

I keep telling them that I have one of these voices that I can teach third grade from here if we don't keep the door closed because my voice just carries. Two of the girls have one of those voices – they should be teachers. They get loud I put down the lights. I don't expect them to be silent. I think they learn from some chatter but I don't want to talk over them. They have time to work together and talk. I try to keep the noise level down because I can hear 2nd grade through my wall which tells me that they can hear me. We went to our camp and a friend's child was there (2nd grader) and he said I can hear you yelling at those 1st graders over there and I asked if I ever yelled at him in first grade and he said yes. Maybe I did. So I try to keep it to a low roar. I do the music and things and it's probably louder than it should be but music should be loud.

Question: How do you determine the instructional strategy (practice) you will use for an activity?

The kids – what they are ready for. Something occurs that tells me that something needs addressed or something I had planned doesn't need addressed because they already know that. Also, I try to throw as much phonemic awareness in other than just the lessons. I try to keep it related to what I am doing what the class was working on. I just look at what each needs – something low but something to do to build her confidence and you have to listen to the Content Standards and Objectives, too. Just fun, the best compliment they can give me is to say we didn't do anything today but play. That's the best thing for them to tell me, so basically their needs. When you spend 8 hours with them you know what they need, you know where they're at. So how to present it – I've had lots of training and staff development. I've been to the International Reading Association Conference two times and usually go the West Virginia one just to see if I can pick up new ideas. Anything that works and if it doesn't work you toss it out and don't do it with that group again, but you may try it with another group. They have their own personalities – the classes do.

Question: Have your teaching practices changed since you started?

Yes, when I first started teaching I had no preparation, I just walked into the classroom the day before the kids and my son was in intensive care, but I needed the job and I took it (long term substitute). I got there and got the teachers' manuals out and thought, what am I supposed to teach? I learned a lot that first year, it was a rough class and I was new although I had personally raised 3 boys. After that I backed up and went into parent training and the GED and I felt I was more in my field. I knew more, but all

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the time I was getting a master's in reading and I went to work in Title I and they gave

me a terrific, wonderful base. I mean, they brought in Cunningham and Allington; staff

development gave me a good foundation. Then I thought I was a pretty good teacher by

the time I got here and then I did the National Boards and when the reflecting – oh. That

didn't work – I had them too controlled and there wasn't enough learning from each other

and time to explore and when I looked at my video tape of my science I was thinking –

what did they learn from that exercise? They didn't learn anything, I stood up there and

directed like they were in college or something. And I don't answer questions well; I

always give it back to them. Look around what is everyone else doing? How did you get

there? How did you get that answer? I was trying to make them independent thinkers.

I'm more of a hands-on type of teacher, I hope, although I do like some control when

they are out of control they are not learning. If they can leave here with that desire to

know more that's the goal – the desire to know more. I think my age, my parenthood,

raising my children and when I used to sub I used to say, "You know I raised four boys,

whatever you're trying is old to me. I know that look – save it for the next sub." I think

that helped, too – I know that helped. I'm a better teacher and I think I get better every

year with the experience with things that work and don't work.

Question: What has changed about your teaching due to the certification process?

Basically, what they asked you to do. You had to look at yourself so deep for that

and then to do that, the lessons you had to watch yourself on video tape and even when

you were writing on your lesson you had to reflect and answer the questions. The

reflection part changed me and to me it was the control part and how I was in presenting

my lesson. It changed how I approached things. It has carried over. I'm probably not as

lenient as I was, as loose, as I was right after, I think that I've hit a medium here where I

can teach and let them learn on their own and still have some kind of management, and

be in control. The thought that they can learn from each other that you're letting that

happen came through the certification process. So and so knows that word, go show so

and so how to spell it. Letting them share their writing, they need to be able to share that

and giving them that time and I don't think I ever did before, but get them in the

spotlight. I read it and they read it to me and they put it away. Now, letting them share it

encourages them to do more and I never thought before they could learn anything from

another student. That was another biggie and they can. That peer teaching and learning

and modeling – the collaboration between each other like the little grouping thing. Ms. T

tries to help everybody. Like K helping M – they care for each other.

Question: Who or what do you feel influenced your teaching the most?

Title I and the National Boards were the most influential. The background and the

places they sent me for staff development and the people they brought in; also working as

a Title I teacher in the regular classroom. The education I got the background in special

education – learning disabilities and MMI. I worked in special ed. and found that it takes

special people to work in special ed. and I was not one of them.

Question: Please share your philosophy of education as it relates to your classroom

practices.

My philosophy of education – it changes, too. Right now, different little people have

different needs and basically it is my job to meet each of those needs. I have different

strategies that I use to meet each of those needs and I think the more staff development I

can get the better teacher I will be and I hope that I never get to the point that I don't

want to learn something else. Kind of a mix-match of beliefs, I don't know what to tell you. I believe that each child comes with his own little package of strengths and weaknesses and you have to build on both. Maybe a holistic approach if you are allowed to use that word anymore. You know I pull everything together, I do try to label it because I didn't use to and they said we don't do math in first grade. I try to use the bigger words they know that their schemata are growing and try to introduce them to the word comprehension. I try to set really high expectations for them; I think expectations are a big part of it. Give them a real purpose for education, like if you can read you can read the morning message. You have to have the desire to read that and their interviews and just a hodgepodge of all kinds of things. I believe in guided reading, in math hands-on, in writing I believe it's linked to reading – the more you write the better reader you are and the more you read the better writer you are. You can see that in their skill level, the kids who are reading higher level books, their writing is higher and a more sophisticated way of writing and the kids that aren't, aren't.

APPENDIX K: INTERVIEW – NBCT NUMBER FOUR

Question: What procedure did you follow to develop your classroom rules?

A lot of it was based on a teacher I had when I was student teaching. We had done the same type of program – the school has a school program with the yellow and blue slips right now, but before that I had my own program with smiley faces where you take down the smiley face and all that. It was basically a warning system. It came from a supervising teacher that I had when I was student teaching so I learned from people that were in the trenches. Basically they are teacher generated rules.

Question: Is this typical of your classroom arrangement?

This arrangement is typical of my class, for space maintenance, to work in groups – they do work in groups sometimes and they help each other with material, but a lot of it is space management. The rooms aren't easy to manipulate. Periodically I change the members of the groups, I try not to change too often because for a lot of kids they need the routine and you can unsettle children if you move them around too much so… Within a year I would probably move four times – a big move. Now I may move a person if it's not working with discipline, but a big move I maybe make three to four times a year.

Question: What are your expectations as far as noise level in your classroom?

It depends on what part of the day it is. In the morning I try to maintain as much of a calm atmosphere as possible, especially during reading and math times, more so during reading. Math we do a lot of hands-on manipulatives so I mean you have more noise so my tolerance levels vary depending on the activity. In the afternoon we do stations so the kids are very often louder because they are working on things together or they are bouncing ideas off each other. It is more of a relaxed time - after recess it's hard to maintain first grade attention so it helps. It depends on the time of day.

Question: How do you determine the instructional strategy (practice) you will use for an activity?

I try to break it down to its most basic. At this level you have to break it down to its most basic function and then I try to show it in a way that it makes sense to the child. I try to relate it to them – we tell stories about things that are in their realm, cats, dogs, and fish. We do addition and subtraction. You have to break it down to manipulatives in math and things like that.

Question: There are two things I have seen in many other rooms that I haven't seen in yours: Hundreds Day activities and Read Aloud. Do you do these?

I have done Hundreds Day in the past, this year it's just an organizational thing. I changed my board, my opening board, it used to be a different type of board, and I'd never done yesterday, today and tomorrow. That was something new to me, so basically I was getting used to a new format myself of opening. It is something I do want to do and I have done, it's just that I haven't gotten back into that routine, yet. We do count the days, we have, we just haven't gotten into it this year, it's a brain freeze on my part. We do that, I have done that.

I read to the children in the evening while waiting for the bus. After they clean-up and do their jobs and then they sit down on the carpet and we read while buses are being called. There should be more, but…. Sometimes I read during that Drop Everything and Read time after recess and they sit on the carpet and sometimes they read to themselves.

Question: Have your teaching practices changed since you started?

I use more manipulatives in math than I did when I first started because we weren't taught that way in college and I always thought of it as being disruptive, it'll be hard to

control because I am a person who likes to maintain control. That's probably the biggest

change. As I've gotten more experienced I've given up a lot more of the control. I'm not

as strict as I used to be. I used to be fully in control and I know you think I still am

because I am so regimented in my routines and stuff but I think I've given up a lot – like

noise level – when I first started I would never have allowed a lot of the noise level I

allow now. I'm not sure if I'm just getting older or what. I understand now that there is

constructive noise rather than just noise and that's probably the biggest change that I've

made and using manipulatives and the way I teach reading. The program we have now

we started five or six years ago and I had parts of it. I was doing parts of it but I didn't

have an organized program of how to teach reading and now I have a program. Before I

was just kind of doing what I thought worked and it did, but now it's more I know why

and I'm structured more in doing it.

Question: What has changed about your teaching due to the certification process?

I do a lot more group type things where they work together in pairs and they work

together in groups of four or five and I let them make more decisions about how things

are done and give me more ideas. Like what we did with the fish paper up there today. I

didn't have any basic idea of how it was going to go or what it would look like and we

just took ideas from other kids and everybody kept building on somebody else's ideas.

So I do a lot more especially in social studies and science where they work in groups and

they come up with their own ideas about how to do things, like with their Veteran's

posters. Again, a little less control, I'm giving up some more control so that's probably

been my biggest change. And going through the standards I realized a lot more that I

need to justify my actions. I knew it worked but now I have some justifications for why

and I know where I can go to get justifications if I need them and that was a direct result of doing this process.

I think I've always been reflective because if it didn't work I thought about how I'm going to do it next time. I think I've always been reflective but I'm more formally reflective, thinking about a different way, a different strategy and more willing to go in a different direction if I need to or want to and understanding that that's okay.

Question: Who or what do you feel influenced your teaching the most?

Probably my family first and foremost – all of them are teachers; well not all of them, but a good chunk of my family is teachers. They've always been influential and I've always been around a school so I've always been comfortable in a school. My mother teaches here, my grandmother was a teacher, my grandfather was a teacher, my husband's teaching now, so that's been the biggest influence. Probably in the way I teach, too since I saw the way they taught. I guess I listened to them reflect around the dinner table so much that I remember they were always doing that, talking about what worked and what didn't and their experience with this and that so I think all of that has been very influential. But, recently, things that have been influential have been research. I started master's classes three years ago. The master's classes are really into research. When I went to college the first time that isn't what it was based on. You just did what they told you to do and there wasn't any research backing it. Now we have pools of research that we can use so that's a big influence on what I do and how I try to change my program too, so family and research.

Question: Please share your philosophy of education as it relates to your classroom practices.

When I reflect on that, I kind of pigeon-hole myself into being a facilitator of information; I don't like to come out and give information. I always like to ask questions and pull information from them and then if they don't come up with it we research it or look it up or look in a dictionary or an encyclopedia. That's they way I like to be. I like to facilitate the information and then watch my children apply it – watch the kids apply it. That's my major philosophy.

APPENDIX L: INTERVIEW – NBCT NUMBER FIVE

Question: What procedure did you follow to develop your classroom rules?

We had a class discussion about things that were important and generated a list of things the children thought would be important to remember. I did guide them on the wording because I wanted it to be a positive statement.

Question: Is this typical of your classroom arrangement?

This classroom arrangement is typical for me. I always do groups; it is based on research and best practices and things that I've read. It's also to develop a sense of community between the groups, instead of competition between individuals. I want a group feeling, family feeling. I try to pair weaker children and stronger children so they can help and develop independence with all of them in the group, independence from me having them in a group situation.

Question: What are your expectations as far as noise level in your classroom?

Noise really doesn't bother me a lot after being a kindergarten teacher. I want them … if I direct them to be quiet I want them to be quiet, but generally as long as they're discussing something we're talking about, if it's not a time that I've asked them to listen to me, it's alright with me if they talk. There have been several times with different children; they don't understand yet that when they see other children talking they think they can talk. They don't understand that the other children are talking about specific things, perhaps the story they are writing or perhaps the words we were generating this morning. That person will feel the freedom to go and discuss something they did last night so then I have to tell them that that's not appropriate. So I guess noise does not bother me would be my answer.

Question: How do you determine the instructional strategy (practice) you will use for an activity?

I really don't know – it's just sort of how I feel about things after years of doing it – I like the children in close proximity most of the time. I don't think that children this age should have to be in desks very much. That would be a developmental level that is inappropriate to be at their desks all the time and do writing on paper. I like the white boards for activities and I choose that a lot because they can easily erase it and they can look on to see what their neighbors are doing and fix their answer. That generates most of the group to follow me and to monitor what I want them to write whereas doing it with paper and pencil they have to erase it. It's a lot more tedious and burdensome for them and the paper looks messy and they become upset about that and that is something I can't fix or control. I love the control when they're close. I would say most of my things are on the floor with me. As for groups, I try to see who is having difficulty and pull them – it's mostly behavior issues where I take them and talk to them and try to make them conform to what I want them to do. We're just getting to reading groups. I have determined the reading groups and I did that by assessing the children with both formal assessment and informal assessment.

Question: Why do you use the balloon in your morning opening?

There are several purposes; the popped balloon represents yesterday, the new one they blow up during the time is today, and the one picked for tomorrow is for tomorrow. I want the children to blow it up if they can. The first time we went through almost none of them could blow it up so I allowed them to take the balloon they had tried home to practice so this time through they are able to do it themselves. That's to foster

independence again. I want the other children concentrating and counting because one of the Content Standards and Objectives is counting up to 100 and back from 20 so they practice that every day so that will just be an observable CSO that I can check off.

Question: Have your teaching practices changed since you started?

Yes, I taught kindergarten, remedial reading, third grade, kindergarten and I was probably nine years into my career when I had an epiphany and found I was teaching the way I had been taught. I went to work on my masters and discovered research and that made a huge difference in my teaching. I taught with worksheets and didn't really talk to my children or do much writing, I thought I did. But during journaling time when I have conferences I have found out so much about the children; my relationship with them is much richer and I can help them develop things to write about, things to talk about and I wasn't doing that before. I had no real knowledge of who the children were or what they could do other than what they wrote down on paper.

Question: What has changed about your teaching due to the certification process?

I was already on the road, but probably exposure to Bloom's Taxonomy was the biggest thing with the certification; redesigning the lessons with a particular focus in mind, scaffolding. I was doing lots of the things without knowing the research and reason behind it because I had read a book that that would work. Learning the reasons why and getting into brain research and those kinds of things really gave me insight into how children learn and what I can do to foster their learning. I have also developed more interest in science and math due to the National Board Certification process.

Question: Why do you teach the way you do? What are some of the influences?

The main thing is that it's fun and I can't imagine doing anything else with my life. The first three weeks of school are really difficult every year and I always think that somehow I'm not going to make it, but as soon as the children start responding to the modeling I do and to the structure and schedule then the rest of it is a joy. So I would say that doing the National Board Certification really helped me with that – knowing why. Really empowering me and making me know what I was doing was right and why. So I have a lot more confidence and a lot more boldness now to speak to people especially parents when there is a problem with a child whether it is a behavioral problem, a developmental problem, or an emotional problem whatever type of thing that it is.

Question: You mentioned at the beginning you used a lot of worksheets, did you enjoy teaching as much?

No I hated it, I really did. I guess I actually started out as an English teacher and went back to school for other certification. The parts of the day I liked in kindergarten through third grade were story time, reading to the children and I had a response, closeness then, but no I didn't really like it. It's much more fun, I feel like it's a calling and before it was a job and I didn't know what else I could do.

Question: Please share your philosophy of education as it relates to your classroom practices.

My philosophy is constructivist; I really believe that children construct their own knowledge within certain constraints that the teacher is there to provide. I think the teacher has to model constantly, behaviors, practices all sorts of things running the gamut from how to form a letter to how to draw a picture to how to write, just everything has to be modeled. Everything has to be built on and tied back into the core propositions of the

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National Board for Professional Teaching Standards. They have to be rooted in that and the scaffolding has to take place on top of those and you have to keep going back. Sort of like a circular staircase I guess – you go higher and higher but you are still going over the same topics. You're reaching all levels, the children who come in able to do and the children who come in unable to do, you have to be able to teach to meet all of those needs and you have to scaffold so that when the one on the bottom is ready to hear what you said two months ago that you do it again and that it doesn't bore the ones at the top. That's hard, that's tricky.

I think my kids are doing well. I was worried about them, but I'm not nearly as worried. Each day seems to be getting better, getting into the routine and handling things so I'm thinking that it's going to work, that I'm going to have a classroom of readers and writers and that is my main objective.

APPENDIX M: INTERVIEW – NON-BOARD CERTIFIED TEACHER

NUMBER ONE

Question: What procedure did you follow to develop your classroom rules?

The procedure that I followed was that I thought about what the children had the most trouble with in the classroom, what did they need work on. And that's what I went for because that caused the most disturbances and that's what I went for, just on what they needed. These rules – I've had these same rules for quite awhile because at their age they all have about the same problems so I don't really need to change them – good listening, being nice to others, the same problems.

Question: Is this typical of your classroom arrangement?

Yes, the Board of Education with the curriculum we have encourages us to let them work in pods. I've tried the individual seat thing and I like it, but I don't have nearly as much room and the only thing I like better about that is they have to work more independently. You know how they tend to copy? That's why I tell them to put their folders on top of it, but this helps so it's okay. But this is mostly what they recommend so it's okay.

Question: What are your expectations as far as noise level in your classroom?

This class is a lot better than last year's. I don't mind if they are working on a worksheet and they whisper a little bit but when I am teaching I expect them to listen and be quiet. I've really been trying to work on it. The teacher who was just in here, her class is always so serene and as calm as she is and I've tried to pattern myself on what she does and not get all worked up over it and it has helped. Instead of getting all worked up about it and saying be quiet; I don't yell but I'm trying to be a bit calmer and I believe that calming spirit comes over them, too.

Question: How do you determine the instructional strategy (practice) you will use for an activity?

By what works and doesn't work. It just depends like with math the other day for the idea of first, second, third I used the example of the kids standing in a line – anything concrete that I can use to help them especially in math, that's why I ask them if they need counters. Some of them don't need counters and some of them do. A lot of it, dealing with reading instructional strategies I sometimes just look at the text and I'll just think about it and a lot of it is just how I've done in the past – to be honest with you, that's how I do it. I use my experience a lot, this is my 25th year and I know what works and doesn't work. Even though I am open to new ideas and as I am getting more and more (my eighth year in first grade) into it I am open to more and more new ideas. The teacher who was over in this class who I patterned after, she helped me, she was a first grade teacher who was ready to retire, she helped me know what to do and how to pace my day. Now that I've been in it awhile I can put that aside and get some new ways of doing it. I'm not so stuck to that because I was so nervous about doing it the way I should do it so I'm more open to that, but a lot of it is just basically experience. What I know from the past and I know it pretty well.

Question: What procedures do you use with your word wall and the words you put up?

Yes, we have to do the word wall words, see most of the curriculum I follow is things we have to do, like we have shared reading, that's when we get our text out, we have to do that everyday. We have to do guided reading which when I work with the groups, we have to do working with words which is my word wall; we have to do of course math, an hour of math. Then we have writing, that's why I started the power

writing yesterday and I'm really excited about that because they are so young and so inexperienced that they don't know how to gather their thoughts and put them on paper. But the word wall is really just a spelling technique; the Board of Education will say one thing one year and another the next year. The way I interpret it from my Four Block book, we have one for grade one, that's for spelling – that's why I give my spelling test on them. After they finish the test we put them on the word wall and when writing they are supposed to refer to that to know how to spell – they don't do it a lot because they just can't remember to look up there, they get into the habit of it eventually later on in the year. [*Observer Comment (OC) the word wall is high up on the wall over the chalkboard]* That's for that and they also have to be able to read all of those words by the end of the year. There's like 115 of them something like that but a lot of kids already know them when they came in because this is a good group. We do activities on the back of the test like you saw today. I'm just getting to that a little more. I think tomorrow I'm going to do -am and you can do guess the covered word or making words where they color the vowels of words written on strips and we cut them apart and then make words out of the letters five letters total. I haven't gotten to that yet because it's early; you don't want to start something like that because it's too overwhelming to them because these are just kindergartners and just coming into the first grade age.

Question: Have your teaching practices changed since you started?

When it comes to worksheets, I don't do very many of them. I do some, because I believe they need to be a little bit independent. When I first started out I did worksheets all the time, do it, do it, do it, because I didn't know any other way to do it. I thought I needed them, but as we went to more training for the four block that we've been doing, it

seems that the worksheets are too easy for the good readers and too hard for the low

readers and I started thinking about that and it does make sense. I still feel like I need it

just a little bit, just to show me if they can do it on their own and are they picking up the

vocabulary. That is one thing I have changed a lot, I have, and I don't do nearly as many.

[*OC Children completed fifteen worksheets during the four days*].

Question: Who or what do you feel influenced your teaching the most?

First of all the county does mandate certain things we have to do – the county's

influence – we have to, they look for: do you have this chart up, how many minutes are

you teaching guided reading, how many minutes are you doing shared reading, and again

back to my experience. That's the reason I teach the way I do. It's the way I learned.

Influences: B – the first grade teacher because she helped me. Also, I haven't had much

opportunity to observe other teachers – the way they do things – my aunt was a teacher

years ago in a one room school so she was an influence too, but the county is the big one.

Question: Please share your philosophy of education as it relates to your classroom

practices.

Down deep, I don't know. I always wondered what I would say if someone asked

me that. I will tell you what one principal told me and I never forgot this – that all

students can learn, they just don't do it on the same day in the same way. That's the best

way I can describe it. I believe for someone to be effective you have to love children, to

know your curriculum, and last of all, but not least, you have to be organized. That's just

how I feel about it. For creative teachers who can go in and wing it, that's wonderful.

But when it comes to not having your worksheets ready, not knowing what you're going

to cover that day, not knowing what might come up, to be prepared. I try to work ahead a

little bit with things I know I can get done so when things get dropped on me I can go ahead and take it and deal with it. I have a stack – this is tomorrow's stack and it's already ready to go. When this stack is gone then tomorrow's stack will move over here. I have a folder that says check this folder first thing in the day and everything they need is right here. I believe you have to be that way to be effective and I take my job very seriously, probably too seriously. But it's the kind of person I am so I try.

APPENDIX N: INTERVIEW – NON-BOARD CERTIFIED TEACHER NUMBER

TWO

Question: What procedure did you follow to develop your classroom rules?

Basically we talked about the expectations, no talking when someone else talks, to be respectful, be responsible and the other thing the check three on the rug is our rug rules. The first rule is they have to get criss-cross applesauce, the second rule is hands in lap and the third rule is lips zipped. These are my rules. They are pretty consistent throughout school.

Question: Is this typical of your classroom arrangement?

The groupings change at least once a month, for the last two the configuration has been the same. Probably next month I will switch and probably put them in groups of three to four instead of four to five. But, I never go by lines they are always in little pods or groups. The reason I use this arrangement is I like a high student, a low student, and an average student in each group, but I look first and primarily at behavior and separate my behaviors and then I look at high, low, medium.

Question: What are your expectations as far as noise level in your classroom?

I don't expect them to be silent because we are social people and I don't think that adults are silent so I think that especially with the research on cooperative learning that they have opportunities to talk and help each other – that's better than being in their own seats and silent. I do expect them to be quiet when someone else is talking whether it be myself or another student and to be respectful.

Question: How do you determine the instructional strategy (practice) you will use for an activity?

I will tell you that most of my instructional strategies for reading and writing come directly from the Ohio State Literacy Cooperative because I've done it and have the

training and feel that it is very effective. This year however I am not able to implement

all 8 components effectively and I think it is going to be detrimental, but I am still

working on how to get all 8 parts in, in the time we have. With math we are starting a

new hands-on more game approach instructional strategy, but I still do not feel

comfortable with it especially on days when I have one adult and games and 18 wild,

hyper students, so ….

Question: Why did you do the activity with pennies and nickels on the board and not with

manipulatives?

We did it on the board because today [*OC activity in question was the previous day*]

we're going to make it individual where they'll have their pennies and nickels and do it

actually on their own desks. When if I am first introducing I like it whole group where

they are all focusing on the same spot. And the way our book is designed that was an

initial orientation lesson. It was not a lesson that expected students to grasp the concept –

it was their first exposure to nickels and pennies other than a homework sheet that went

home.

Question: Have your teaching practices changed since you started?

They've changed, yes. My teaching practices have changed first of all, especially

after the Ohio State Literacy classes because I saw the effectiveness of it and the

importance of the 8 components and putting them together. Also, when I first started

teaching I was basic skills which meant I had a 40 minute reading, math, or language arts

lesson in every classroom in the school in the course of one day. And at that time I

would review a concept and give a sheet to check their practice and where they were at

that point where now in my own classroom and having the entire day, most days, I can do more hands-on, interactive learning, and cooperative grouping.

Question: Why do you teach the way you do? What are some of the influences?

I teach the way I do, not only because of research but because of seeing the effectiveness of programs I've tried or been introduced to. I've attended a lot of staff development through the county and I've also traveled to Ohio to an international conference (Reading Recovery) with reading. I also had the training in Charleston – Reading Academy – on newer reading strategies that they had found to be effective. I went to it. I have traveled to Europe and Asia and viewed special education facilities there. Then I also attended a conference on early childhood education in China one year.

Question: Who or what do you feel influenced your teaching the most?

Other than Ohio Literacy, I think actually being in the classroom and trying things, what worked and didn't work. What I found to be successful, what I sensed is too frustrational for me and there are things that I will try with certain groups that I wouldn't do with other groups. There are things such as the math games that I found to be more effective if there is more leadership in the room than just myself. Days I don't have the extra help in the room I bring in sixth grade helpers during their recess time.

Question: Please share your philosophy of education as it relates to your classroom practices.

My personal philosophy is that every child is a unique individual and that every child walks into my classroom at their own point of learning. You are going to have low ones and you're going to have high ones and typically your middle average student is less and less each year. My philosophy is to take every child where they are and progress them as

far as they possibly can personally and it's a personal goal with each child not I want all children to be on this level when they come in and on that level when they leave. And my strategies are or my philosophy is to find which strategies work best to help all individuals because some students are going to learn whole group, some are going to learn on the rug, some are going to learn in the small group.

APPENDIX O: INTERVIEW – NON-BOARD CERTIFIED TEACHER NUMBER

THREE

Question: What procedure did you follow to develop your classroom rules?

The first week of school I spend almost the whole time going over what's on my walls and my classroom procedures about how things work. We don't start a story right away because it takes a good three or four days for us to go through all the posters, all the rules, and all the procedures and the way we do things so it takes a good little while. And they know no toys – I didn't put that up on there, but they know I don't allow toys. These little erasers that are little balls and things, and I like to use erasers as little rewards, in fact I gave them erasers for rewards one day and my poor little polar bear didn't last one day before somebody bit his head off. So, consequently I tell them if they're caught playing with their erasers they get a warning because if they're playing I consider them toys and so if you get caught a second time then they belong to me and you don't get them until the end of the day and you need to take them home and never bring them back. Again if you bring them back I keep them and your parents have to come and get them and you're never allowed to bring them back. So that's it basically – it takes a good four days and we just read for fun those four days while we go over basic rules and procedures.

Question: Is this typical of your classroom arrangement?

No, it is not typical, I used to do rows all the time and a friend of mine calls this the saw tooth and I kind of like it because I am able to reach everybody from the center – the only problem is I have to watch who I put into the back because some kids can't see very well so I allow them to come up and check the board – to do the board work up front if need be. I'm going to try to leave it for awhile. I usually change furniture a lot – I usually change furniture at least once a month. Sometimes I do pods – pods usually do

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not work. They're too chatty, now if I'm doing science experiments and stuff then they'll work – you know working in groups. Then we have jobs for each team person, but I do like this way because I can reach everybody and makes it so much easier for me to check planners every morning. I've never had enough room to have it this way, I've never had a large enough room and it's taken me 35 years to get a room this size.

Question: What are your expectations as far as noise level in your classroom?

There are times when we are doing an activity which is not for a grade, I allow them to talk, but if it's for a test or for a grade then I do not expect any talking and they'll get a warning and after that they get an F and they have to stay in and take the test again. If we're doing a fun activity like we're going to be writing a poem about the spiders tomorrow and making spiders and when it's an activity like that I let them visit as long as they don't get carried away. They can't stay quiet all the time at this age, and I wouldn't expect them to.

Question: How do you determine the instructional strategy (practice) you will use for an activity?

Well, from past experiences a lot of it. A lot depends upon the group and sometimes it takes awhile to get to know your group so that you know what's going to work and what's not going to work. I try to put the kids that need more hands-on, stay focused type things closer so that I can keep their attention because some will lose their attention very quickly. Usually I would say just through experience of what I have done in the past, but I'm always open to new ideas and suggestions so I keep that in mind.

Question: Do you do any hands-on activities on a regular basis?

I have not done very much so far this year because of the kind of group I have. Because this 90 minute thing is new and it sort of has taken the wind out of our sails a little bit at the beginning because it is new. [*OC- this is in reference to 90 minute uninterrupted reading block mandated by WV*] So we're half afraid to do anything that might not be reading, we wanted some verification yesterday about what we could do. She did tell us yesterday and that's why I went ahead and did even though it wasn't in my plans to go ahead and write a new ending to the story – that is permissible as part as our reading.

Question: Have your teaching practices changed since you started?

I've sort of mellowed out believe it or not; I used to be stricter than what I am now. Now I sort of put myself in their shoes more so than what I used to and so there are so many factors from families coming – so many factors that you have to deal with that you have to take under consideration that you didn't have to before and so that's probably one of the main things. I'm more aware of their problems and their home life and try to make exceptions for some of them for certain things where I didn't used to do that. So I'm a little more lenient in a lot of ways, but I'm still a stickler for as long as it's class time we'll do class work and the fun comes later and if we don't get the class work done there is no fun time. I will adhere to that till my dying breath.

I have done a lot of fun activities through the years and I really feel bad because these kids have not been subjected to a lot of the things I have done up until now because I'm half afraid during station time to use some of these things because it's not reading, know what I mean? I used to do a lot of trace pattern type things and write a story about them or copy poems, but now because they want a total 90 minute reading I hesitate to

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use a lot of things that I did. I would like to be able to have the Title I teacher work with kids who need reteach and let me work with maybe some of the kids who could do some enrichment things. I do provide some enrichment activities, but I haven't started them yet. For instance I have one to 100 charts that I staple ten of them and they have a math folder so when their math work is done they can get their math folder out and if they can write their numbers to 1000 and I check them then they can be a math superstar and get their star up there on the board. That's something I've always done and they can do when their work is done and of course I have the reading contests, anything to entice them to be better readers and that type of stuff.

Question: Who or what do you feel influenced your teaching the most?

I never quit learning – I've gotten a lot of good ideas this year and last year from my teammates. Some things – we always have three spiral notebooks one for reading, one for spelling and one for bell ringer activities – and I never gave it a thought but one of my teammates said why don't we say we need a blue spiral, a yellow spiral, and a red spiral? Then use a specific one for each subject and if I have study duty then I know which spiral they should have with them and you could just eyeball them and see what they're supposed to be doing. Well, I never gave that a thought – that helps us all. I've learned a lot of things from other people and I've told others what works for me might not work for you. I can give suggestions but it doesn't mean it will work for her. I really and truly have learned more in the last five years from just getting things from people I work with and it really keeps your interest level up – It really does. I mean you get stagnant after awhile. For example I had some things I made 35 years ago and still used them – like for Thanksgiving I had this Indian with a rug and he was doing smoke signals and I had a

cloud and a fire and it said have a Happy Thanksgiving – well I'd used it for 34 years. I

got tired of looking at that stupid Indian board and I threw it away. It gets old after

awhile and I like new things every once in while and I was able to get a lot of new things

from my teammates.

Question: Please share your philosophy of education as it relates to your classroom

practices.

I don't know that I can actually give you one; it's been so long since I actually gave

one to somebody. I believe that every child can learn you just need to find a way to reach

them. I believe that there are developmentally delayed kids, that's what we used to call

them and I think that's what we should still call them because some kids are

developmentally delayed. For instance J – he didn't start talking till he was five and now

he can't quit. But I believe that every child can learn you just have to find what's going

to work with that child.

I believe that you need to have a good routine. Once you go off of a schedule it's -

you gotta keep a schedule. So, I believe every child can learn. I believe that they need

structure and I think you need to keep a routine because if you don't it's really horrible,

to put it mildly. Routines – if routines are broken, I like these plays and stuff but when

you're breaking the routines and you've got to stop and do practices – that type of thing

really throws kids and you might as well not teach all day because they're not going to do

very much because they're too excited about other stuff.

So, I believe you're never too old to learn as a teacher. I believe you can always learn

new things and I've found that out in the last few years. I think you need to not show

favorites. I know it's hard not to and I've really worked hard over the last 30 years not

to show favoritism and make sure I call on each child before I call on another child for a second time because I don't want them to think I have favorites even though I might, I don't want them to know that.

Open space is not the best kind of atmosphere for most of these children. We've noticed that there are too many distractions. If she's doing a fun activity next door, my kids aren't listening to me – they want to see what they're doing over there. It's so hard – the listening ability. I think a lot of that comes from home too because the kids are put in front of the TV so they tune out mom and dad and everything else and it shows here. You have to say things four and five times before they listen and I'm not going to do it. I keep saying you better listen, but I always manage to say it at least three times, but I try to work on that because the third grade teachers tell me they can always tell which ones were mine because they're more prepared because they've learned to copy from the board, they've learned how to copy from a book. There are so many hard back books in third grade and no workbooks and they have to learn how to copy so I try to prepare them for third grade and most of the time I succeed, but there are a few that get to the wayside, but I try.

APPENDIX P: INTERVIEW – NON-BOARD CERTIFIED TEACHER NUMBER

FOUR

Question: What procedure did you follow to develop your classroom rules?

We do have Jaguar rules for the school but for the classroom rules basically they're the ones I've used for several years. We had an expectation chart we used to have up and we have discussions about how we can make the room a better place and it pretty much comes from that. Students have input and we talk about how we can travel safely in the room and in the hallway and so on. The big thing here is if you want it, teach it. Then that first day – a lot of people wonder why you have school starting on a Thursday or Friday, then have a weekend, but for us we like that because it takes that long to teach kids how to line up, how do you go to the bathroom, the procedures. Those are things that if you want that behavior you have to teach it. Yes, those are all things we talk about and then once we go over it we send the paper home and the parents and students have to sign it and return a copy back and we have a file of that, that there was an understanding these were the rules and these are the consequences and then the parents should know if they've read it and if they haven't read it – well that happens sometimes, but at least we gave them the opportunity.

Question: Is this typical of your classroom arrangement?

Yes, it's typical, every year I try to find a better way but I consistently have the guided reading here. One year I had this guided reading table over there (indicating area around computers) and it didn't work because I needed to have a separation between the guided reading and the people who were at their seats and I didn't want people floating by our table so that is why I keep guided reading here. I like to have little stations – we have our science back there and we've got our books and we come to the back carpet if we're going to write a story together – kind of a writing center although they know they

can do that anywhere – we have a little writing tub. I like to have a place where we can

come together as a group. The hardest thing is making room for that overhead because

I'm always afraid of that cord, the kids tripping on it. The overhead is pretty much up

there. You know, its taken a while to know what works for you, you know what I mean?

To get it right – but yea this is it, I've always had my mailboxes there and the computers

up in that section and that little area is math so they know where to look. We're doing

math so we know where we can find those words. I pretty much have always had my

desk back here because I am not a sitter; I use my desk just to organize things. If I sit I'm

going to sit out here in front of them or to read a story. For me this works now, it isn't

for everybody but for me it works. [*OC Desks are grouped as tables]*

Question: What are your expectations as far as noise level in your classroom?

Well, when we talk about noise level we talk about, we use the inch thing, one inch

voices, five inch voices and we do that at the very beginning of the school year – we talk

about what that is. I like to have conversation in the classroom, I like for them to talk

with a neighbor or work with a neighbor so for them when we're having guided reading

group as long as it's not interrupting the group, I say it's A-ok and that's me, I like that. I

have a saying while I'm in group, ask three before me, because I think it's important for

them to go to their neighbor and ask what are we supposed to do and maybe if you have

to ask that often enough you'll be embarrassed. I think some of them would, you know

what I mean. To me that's important so they can do a good job of kind of taking care of

one another. And most of the kids do. Now if it gets too noisy like if we're doing an

activity then I just do a "Give me Five" and we just kind of have to tone it down.   So

that's nothing that – I guess they know when they're allowed to talk and when not to, so…

Question: How do you determine the instructional strategy (practice) you will use for an activity?

I guess I think what my goal is, if we're working on comparing and contrasting, I love the Venn diagram. I know the kids do that and that's something we'll go through tomorrow. I like to put them in groups with just the plain two circles, I don't put any labels on them and then they … I like worksheets that you can use for a lot of things so for compare and contrast we'll use that a lot. We try to do one of those at least once a week. Summarizing we kind of stick with the same ones – like the retelling, the five-finger retell and I guess for second grade I like to kind of really work a strategy enough so they really know it before I move on to something else because I want them to be able to do it in group when I say okay sit with your partner and pull out a Venn diagram and I want to know two or three ways an apple and an orange are alike and different. I want them to be able to know what that means even if they don't have the worksheet and they can make it themselves. Other strategies for math and stuff that's – whatever we've been learning I try to make that the thing that they work on for their bell ringer so that's kind of reinforced. Whatever we've been working on and then sometimes I'll pull out something we did for awhile like number families because they forget. To me I've always found that if you do something just a little bit of time everyday that's better than if you spend three weeks on it and then dropping it totally. If it's something in math I like to kind of pull it back and that's why I like the bell ringer because I can do that – I can pull those. I'm thinking of other strategies – for read aloud, those are things I've

pretty much picked up from workshops and such. Not to read always – ask what do you

think and predictions, those type of things; I guess those are just things I'm used to doing,

any read aloud I like to do that. I don't know. I think that here we've learned so many

different strategies that at this point I don't think about it I just kind of choose one I'm

comfortable with and go with it. Now if it's something new then we'll work on it for

awhile.

Question: Do you do much small group work?

We'll do small group work at times, sometimes when we do guided writing sessions

we'll get into smaller groups while they're working I'll pull some out. It just depends on

the activity we're doing.

Question: Have your teaching practices changed since you started?

I didn't even know what a graphic organizer was and writing was – we copied a

poem off the board and put it on the bulletin board. You didn't invent your own

sentences, you might have done dictation sentences, but never have them create their own

sentences, we never did proofreading where we use – I though a carrot was a vegetable I

didn't even know it could mean something you added. They know how to loop things

out; they know the three underlines mean a capital. When we read we didn't do partners

and there wasn't – we didn't talk. You pretty much listened to the teacher.

The teacher talked, it was pretty much teacher directed, where now you kind of want

the kids to get into a routine so they can pick up. I want it to be so that if I weren't here

they would know what to do, that they could pick up and do it because then they've got

ownership and that's why through the day, I'll say to them, I can tell when they're getting

antsy, do you think we should keep doing this or how many people – I like to let them

feel like they've got some ownership in the classroom and that they can make some decisions, that's important for them and to know that in a democracy the largest group of people is going to rule. So, yeah I'm more flexible that way. When I began teaching I didn't have my own children and when you have your own children you're more patient or more understanding, but oh yeah.

I just love the way we have guided reading now and we pull the small groups and the investigations in math with the little manipulatives I mean that's everything, overhead projectors, line-ups – I never did anything like that. I'm going to say so much of this has changed and I'll say in the last five years. The last five years we've learned – it's like every time we go to something we go wow. Even in guided reading to do guided comprehension and now it's so good to see somebody model that. It wasn't that we were lectured – somebody came in and worked with the students and they showed us how they would do it. So I think okay if they can learn, I should be doing that with the kids too. Let them investigate and learn.

It's more child centered in that they have a little bit more authority over what they can do to make decisions and stuff like that. I could never go back to the way I used to teach, never. The only thing that hasn't changed, even back then I didn't like to sit behind my desk, but it wasn't like I did anything differently, it's just that I like to be with them. I like to see what they're doing and be with them. And even the little workshop games, word sorts or make-a-word, which we'll be doing one of those tomorrow, they are simple things, but they are so effective. Even the organizers to think about how to write a story. Even my kids can kind of remember that. By the time they get to fifth grade if we

start building now when they have to write something they're going to remember all these things because we give them that organizer to kind of organize their thoughts first.

Question: Who or what do you feel influenced your teaching the most?

I'm going to say the Title I teachers because they're the ones that got the knowledge and they brought it to us. The Title I curriculum team, they're the people that hire the people to come in to us to teach us these strategies or we go out somewhere to learn and we see these strategies. We've had some excellent people in the last five years and seeing those people work with kids in our room has been invaluable and has influenced me a lot. When I got my masters in 1999 that influenced me. Doing that research on the writing and the collaboration with the peers, reading all that research made me think about what I do. I'm a big fan of *Instructor Magazine* – I like to read that. I love like Marilyn Burns and Donald Graves for the writing and so if there's a tip in there or a strategy or something I like to use it because I respect those people. So when I read about how this concept may be difficult for kids so you can do this, this, or this I pull things. But I'm going to say by and large if I talk about all the strategies I'm using now it was Title I. There are places in this county where the kids are working at much higher levels because they're in high economic places and their parents are doctors or whatever. They don't have half the strategies we do. They may have difficulty knowing what to do with a child that comes in that struggles. So where we've got so many strategies in place for everybody, I feel very lucky for that.

Question: Please share your philosophy of education as it relates to your classroom practices.

I guess we're all learners so my philosophy is when the kids come to me at the beginning of the year it's a brand new class and I don't usually like to look in their files too much, even though they tell us that, because I don't want to have a preconceived idea of them. I want to just see what I see and then I can find that out maybe later and wherever a child is at, I think it is real important that we just go from there. You can spend a lot of time saying, why aren't they on second grade level? Was it their teacher, or what? A lot of that is a waste of time because let's start wherever they're at, we need to assess that, and then we know what to work on and then we just keep working with the students.

I think it is so important to work with their parents if we can get through to them because I think they are absolutely the most important teachers and I tell them that in my newsletters. They are the first and they are the most influential. I might have the children eight hours a day, but what happens at home – that overrides a lot of things. I also know, too, that for many of my students I may be the only person that – when you talk in loco parentis – for a lot of these kids I'm it. I'm a little bit like a foster mom or something and I take that, that's important. Anything that happens, if they have disagreements, kind of like a little community, we can't get people to get along in the world if we don't start with the little unit, your family or your neighborhood and for us this is a little neighborhood a little community. Maybe if they learn how to handle something here they can take it – although it's not going to be reinforced in a lot of homes and we tell them that. We say, you know that what we're teaching you here may be totally different from home, but that's okay because we don't want to be their parents and tell them they need to do this. But, it's okay for them to learn that – the way we do

things and the way to do things properly may be different from what's done in your home. That involves language, how you get along with people, how you respond to people, if they're different. So I guess that's my thoughts.

APPENDIX Q: INTERVIEW – NON-BOARD CERTIFIED TEACHER NUMBER

FIVE

Question: What procedure did you follow to develop your classroom rules?

All that is done in the first month of school at circle time where we talk about basically the attentive listening and we practice listening with just the ears. There are a lot of little games and stories and then listening with your heart and they all get the mind thing and they all know they're supposed to listen with their mouths closed. It's just a lot of little games we developed during the first weeks of school and if I refer to attentive listening sometimes they'll go through all of the steps written up there.

That's all from Tribes training – I've had a lot of Tribes training and we always do that the first month of school to establish the rules. *[OC Tribes Learning Communities strives to create caring and safe environments in which kids can do well]*

Question: Is this typical of your classroom arrangement?

No, I can't tell you how many ways I've had this room arranged until I found something that would work with this large a group of people *[OC has 25 students in the class]*. Still some of them can't be in a large group of people and see, there's no place to put them. With this arrangement it's sometimes difficult for them to see things we're doing on the board or if somebody's doing something up front – it's still really hard. If I had the space I would still probably put them in groups, not as big, smaller groups and where there are those who are so distracted being around others, they would probably be away or they are the ones who distract others. If I didn't have so many people.

Question: What are your expectations as far as noise level in your classroom?

You can tell the difference between working noise and disruptive noise and they have to be, they have to make noise if they are working together. You can usually tell when it breaks into an argument.

Question: How do you determine the instructional strategy (practice) you will use for an activity?

Personalities of the students in the class. The /sh/ was pretty straight forward, the diagraph /oo/ I left a lot of stuff out of that phonics lesson. There's more – the barbells because they're so active and the owls because they're so active and everybody has a different channel of learning. I'm trying to hit as many as I can. So I'm a big one for putting it on the board and they are writing it because you heard the children yesterday say no, I didn't like that because we didn't get to write down the answers. They wanted to write the problems. So I will probably let them next time, if they want to write, write them. I didn't know; I'll listen to them. Just their personalities you can tell and if you have more boys you're going to have a more active class. You have to do more active things which sometimes interferes with people who would rather do things quiet. You have to calm them down.

Question: Have your teaching practices changed since you started?

Well, let's see I was a whole lot younger. My teaching practices have changed because we have so much we have to do now. So much we are expected to cover and so much they are expected to learn which is not necessarily a bad thing, but they lose a lot of – there's not a whole lot of time for them to share. If you could just slow it down. I think that I was probably slower years ago – there wasn't so much pressure to get things covered so maybe we didn't do as much academically as we do now. The centers, the reading groups, I've always done that. That's from my students teaching and my first years in first grade from the people that mentored me through that. I've always done centers and some people have a really hard time with the centers, understanding what

they're supposed to do. They learn a lot from one another and some centers really work and some you say boy, that didn't work with this group. So you just never know when you put those out what's going to happen.

Question: Who or what do you feel influenced your teaching the most?

Marshall University – two professors specifically were really instrumental in teaching to the whole child – I was in early childhood then. The different channels of learning – I'd heard that since the first time I walked in the door in an education class so I knew there were different channels of learning. My student teaching was done with two teachers who were Marshall Graduates and they had centers and reading groups and a noise level that was kind of up here. When I went to first grade I remember saying, O gosh, I'll never be able to do this. The teacher across the hall from me said, yes you can, yes you can. Those people were really instrumental.

And then when I go to things, the literacy stations were something that came from the Reading Symposium – a girl did a really quick thing on them. They were geared for upper level but I said I can do this with little kids, just 5-10 minutes to work on one little thing together and it gets them up and somebody somewhere is going to get something out of that and that gives me at least 5 – 10 minutes to pull a couple of kids aside to try to get to them. My ultimate best classroom is 18 students when I can see every child every day and I've had that. This isn't going to be one of those and it really bothers me because there are some that are really struggling and it's bothering me that they are. I can take them out of music or out of art, but I won't. The class is too big, there are too many.

Question: Please share your philosophy of education as it relates to your classroom practices.

Teaching – I still have fun and as long as I have fun with the kids and as long as the kids learn and have fun, then you can learn by having fun and a good time. A good time is not necessarily tearing the room apart. There's a good way to have fun and learn something. As long as I can do that and they can do that then I'm happy. There have been times when it hasn't been fun. It's becoming – I don't know how the children feel, I would like to know. I don't know how you compare ten years ago with now, if they have fun. Sometimes I feel like we're just really overwhelming them. And I just really want to teach everybody to be a functioning member of society and how do you do that with a six year old – well they've got to have a start. They've got to know how to read. That's the biggie.

I think one of the biggest changes I have seen besides pushing everything down academically is parental support. One of the saddest things is the classes with no parental support and no family unit that is established and I think that the deterioration of the family is probably the biggest problem we have at school. You can tell – I don't have to do this, the teacher is supposed to do this. I think it gets worse with younger parents.

Also, you cannot come to school a few minutes before time and be prepared.

APPENDIX R: PRACTICES AND THEMES MATRIX

Matrix One - National Board Certification

Best Practices	NBCT 1	NBCT 2	NBCT 3	NBCT 4	NBCT 5
Student-Centered	■■	■■	■■	■■	■■
Experiential	■■	■■	■■	■■	■■
Holistic	■■	■■	■■	■■	■■
Authentic	■■	■■	■■	■■	■■
Expressive	■■	■■	■■	■■	■■
Reflective	■■	■■	■■	■■	■■
Social	■■	■■	■■	■■	■■
Collaborative	■	■■	■	■■	■
Democratic	■	■	■	■	■
Cognitive	■■	■■	■■	■■	■■
Developmental	■■	■■	■■	■■	■■
Constructivist	▪	▪	■	▪	■
Challenging	■■	■	■■	■	■■
Emergent Themes					
Scaffolding	■■	■■	■■	■■	■■
Role of Research		■■		■■	■■
Professional Reflection	■■		■■	■■	
Modeling	■■	■■	■■		■■

▪ Slight evidence

■ Evidence

■■ Consistent evidence

Matrix Two - No National Certification

Best Practices	Non 1	Non 2	Non 3	Non 4	Non 5
Student-Centered	▪	■	▪	■	▪
Experiential	■	■■	■	■■	■■
Holistic		■■		■■	■
Authentic	▪	■■	▪	■■	▪
Expressive	■	■■		■■	■■
Reflective	▪	■		■■	▪
Social		■■		■■	■
Collaborative		■		■■	■
Democratic	■	■	■	■	■
Cognitive	▪	▪		■■	▪
Developmental	▪	■	▪	■■	■
Constructivist		▪		■	▪
Challenging	■	■	■	■	■
Emergent Themes					
Scaffolding	▪	▪	▪	▪	
Role of Research		■■		■■	
Professional Reflection					
Modeling	■■		■	■	■■

CURRICULUM VITAE
SUE ELLEN HOLLANDSWORTH

EDUCATION

Marshall University
Doctor of Education in Curriculum and instruction, 2006
Marshall University
Education Specialist in Curriculum and Instruction, 2004
West Virginia College of Graduate Studies
Master of Arts in School Administration, 1980
Mercyhurst College
Bachelor of Arts in History Education, 1971

CERTIFICATION

State of West Virginia, Elementary Education, 1-8, Permanent
State of West Virginia, Social Studies, 1-9
State of West Virginia, Gifted, 1-6
      Additional Endorsements: Middle Level Education
State of West Virginia, Administrator K-8, 5-12, Permanent
State of West Virginia, Superintendent, Permanent
          Supervisor General Instruction
          Vocational Administration, 5-Adult

PROFESSIONAL EXPERIENCE

1973 – 1990	Teacher in Pocahontas County, West Virginia
1998/1999	
and 2001/2002	Principal at Hillsboro School and Marlinton Middle School Pocahontas County, West Virginia
1990 – 2003	Principal and teacher at Hillsboro School, Pocahontas County, West Virginia
2003 – 2004	Special Education Administrative Liaison with WV Department of Education
2004	Distinguished Educator with WV Department of Education
2004 – 2005	Educational Consultant with Webster County Schools
2004 – Present	Doctoral Graduate Assistant at Marshall University