POWERFUL PROFESSIONAL DEVELOPMENT: A PERPETUATION

THEORY AND NETWORK ANALYSIS OF TEACHERS'

PERCEPTIONS OF THE NATIONAL BOARD FOR

PROFESSIONAL TEACHING STANDARDS

CERTIFICATION PROCESS

By

JERITA W. SOUTHERN WHALEY

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Oklahoma Christian College
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Master of Science in Education
Oklahoma State University
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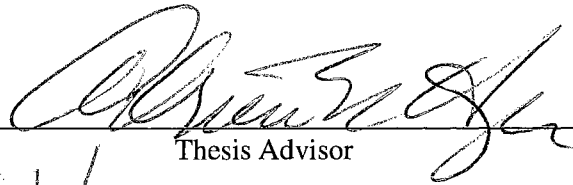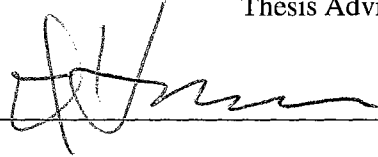the Degree of
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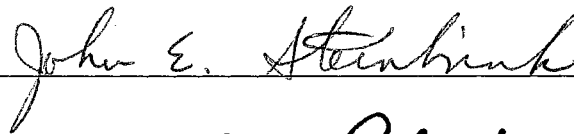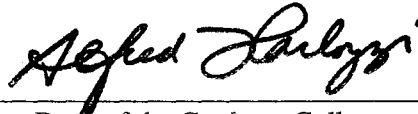
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Thesis Approved:

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Thesis Advisor

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Dean of the Graduate College

ii

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER I

We are now at a point where we must educate our children in what no one knew

yesterday, and prepare our schools for what no one knows yet.

—Margaret Mead (NSDC http://www.nsdc.org/educatorindex.htm)

[T]eachers who know a lot about teaching and learning and who work in

environments that allow them to know students well are the critical elements of

successful learning. —Linda Darling-Hammond (1997, p. 8)

How does the United States educate its children for success in a world where

change appears to be chaotic and unpredictable? Are teachers the key to continuous

school improvement? And if teacher knowledge about students, teaching and learning is

important, how do we prepare, support and encourage teachers within the complex

assignment of educating a changing mix of students from diverse backgrounds for an

unknown future? The above questions help to frame the current discourse about *powerful*

professional development, the kind of teacher development that continuously improves

teacher practice and student learning. This chapter begins with a short story about what

we know that has *not* worked within professional development, moves on to give an

overview of current thinking that influences a new approach to teacher development, then

states the problem, purpose, theoretical framework, and procedures of this study.

On a cold February day Stephanie Hirsh, deputy executive director of the

National Staff Development Council, told a group of state leaders in professional

development that educational research on the effectiveness of staff development indicate

that probably 90% of the planned inservices do not improve leadership, teaching, or the

learning of students in the classroom. Ms. Hirsh further informed the group that staff

development is too often unfocused, insufficient, and irrelevant to the day-to-day

problems faced by front line educators. While the group tried to catch a breath after the blow just delivered, Ms. Hirsh continued her criticism of current professional development planning by stating that educators know a great deal more about good staff development than is regularly practiced in schools, and in agreement with Dennis Sparks, executive director of NSDC, she proclaimed that only substantive changes to the way staff development is planned, implemented and assessed can infuse teachers with the pedagogical knowledge to meet the changing needs of students (Sparks, 2002).

Having been involved as a staff development leader and planner in my district and state for more than 15 years of my almost 30 years in education, I at first felt stunned by Hirsh's biting criticism, but deep down I knew that the research results that she was reporting were verified by my own experience. Education reform efforts have spent thousands of dollars on professional development for teachers and administrators in districts like the ones I have worked in, but student learning has not been enhanced (Sparks, 2002). So what can those who plan professional development for teachers and administrators do to improve teacher and student learning? In my classroom the students' test scores were usually very high, and this fact along with my students' enthusiasm for learning were taken by me as indicators that I was developing very well as a teacher within the profession, but as I look back I know that I could have done much more to improve the learning for my students if I had had the kind of professional development that is a continuous process of ongoing learning within a collaborative network of inquiry.

I taught in our state for about ten years before there was any effort to formalize staff development for teachers and administrators, and I found teachers with a heart and soul for teaching who wanted to pass on to young teachers like me knowledge and skill in guiding the learning of children. My first mentor, who assisted me because it was her

choice, taught across the hall from me and truly escorted me into the profession during a year that was not without tears. When I married and moved to another school there were other mentors who influenced and guided my growth in the profession out of the goodness of their hearts. I attended graduate school for more study to enhance my learning and growth as a professional. Not unlike other teachers in the 1970s and early 1980s the primary sources for my professional development were learning with and from other teachers informally, while I was formally studying toward a masters degree at the university. I learned many things that translated to my classroom, but now I believe a professional development process focused on student learning and embedded in my daily teaching could have helped me match my practice more accurately to the needs of my students.

During the 1980s many education leaders decided to formalize the teacher development process through staff development for the purpose of improving teacher practice, because according to research many students were alienated, performing poorly and dropping out of school (Fullan, 1999). Law makers believed that students were ill prepared for "productive work and citizenship" (Fenstermacher, 1990, p. 131), and so schools needed to change. So how could the nation's leaders reform schools in order to make a difference in student learning? Many educational leaders believed that the key to better student learning was better *teacher learning* (Darling-Hammond, 1999; 1997; Guskey, 2000; Hawley & Valli, 1999; Mack, 1999; Sparks, 2002; Sparks & Hirsch, 1997), and *teacher learning* was given many different names in an effort to describe the professional development process that helps teachers improve their practice.

The term *professional development*, as it is commonly used in education, is simply the development of people within the profession for the purpose of better student learning (Ball & Cohen, 1999). *Professional development* is sometimes used

synonymously with *staff development*, and both terms have broadly come to mean many kinds of activities for which educators are credited with staff development points or Continuing Education Units (CEUs), which in many districts and states are necessary for teacher recertification (Sparks, 2002). Within the past 20 years in an effort to formalize professional development and make educators accountable for improving schools, many states have rigidly defined that only certain kinds of activities such as workshops, university courses, or presentations by experts would qualify for staff development credits or CEUs (Sparks & Hirsch, 1997). The reform efforts that formalized staff development and made teachers accountable for their growth in order to improve education pushed many educators toward a more measurable behaviorist approach. Blackburn (1994) defines the behaviorist view of B.F. Skinner in the following:

> Skinner's belief that the explanation of behavior through belief, intention, and desire is somehow unscientific…Philosophically the doctrine of behaviorism is that mental states are logical constructions out of dispositions to behavior, or in other words, that describing the mental aspects of a person is a shorthand for describing the various dispositions to behavior that the person possesses. (Blackburn, 1994, pp. 39, 40)

Reductionism (Goodlad, 1990), in this case reducing teaching to a prescriptive list of behaviors (Mack, 2000), influenced at least two aspects of accountability for staff development. The first aspect *reductionism* influenced was time. Formal staff development activities are often credited according to seat time or how much time was spent in the activity (Guskey, 2000). A second aspect influenced by *reductionism* was an evaluation of the traditional staff development activities' content using a checklist of teacher competencies. The competency checklist is usually based on good research, and principals are required to evaluate teachers on the basis of their demonstrated ability to

teach to specific instructional objectives represented in the checklist. Goodlad (1990) describes how this *process of reductionism* relates to staff development in the following:

By the mid-1980s, many states were well advanced in the folly of defining the education to be gained by children and youths in schools in the form of behavioral proficiencies easily tested. Teachers, in turn, were to secure the competencies believed required to inculcate these proficiencies in their teacher education and staff development activities. Earlier California had sought to mesh the requirements of two legislative bills into a fully interlocking, rationalized system combining these processes of reductionism. Folly was added to folly in the passage of a bill designed to require principals to evaluate teachers on the basis of their demonstrated ability to teach to specific instructional objectives. (p. 18)

The harm of *reductionism* according to Goodlad (1990) is more in the way it limits. Some good might be accomplished in an orderly, organized approach that prepares teachers to teach certain objectives, but this is commonly where the vision of what teaching and instructional leadership are all about stops (Goodlad, 1990). In the mid 1980s many teachers and principals came through crash "in-service workshops in this behavioristic mode" (Goodlad, 1990, p.19) believing that it was the panacea for curing teacher ineffectiveness. Efficiency-minded administrators and lay citizens found this behaviorist approach appealing, but Goodlad (1990) compares defining teaching in this mechanistic way to defining surgery as so many movements that can be trained. "Of course, the movements must become automatic, but, even mastered, they do not a surgeon make" (Goodlad, 1990, p.18). Somewhat like surgery, the substance of teaching is derived from a richly layered context where teaching decisions are made. Mastering a

well-developed science of teaching would not provide guidance for the burden of judgment teachers carry (Goodlad, 1990)

So how do teachers learn to make the judgment decisions in schools that will prepare students for a changing world? So far we know more about what does not work than we do about what does work. The consensus of research described by Dennis Sparks (2002), Linda Darling-Hammond (1997) and others (Guskey, 2000; Hawley & Valli, 1999; Mack, 1999; Sparks & Hirsch, 1997) supports Goodlad (1990) and indicates that the workshops, university courses, or presentations that promoted this behavioral approach in using staff development to instruct teacher competencies have not in and of themselves inculcated the knowledge or values in teachers that brings substantive change in classroom practice. For this reason leaders who want to use professional development to make schools better are using language and strategies that shift the focus from the inservice activity that can be measured by time and evaluated by a prescriptive list of teacher competencies to processes of development that meet the learning needs of the people involved (Mack, 2000).

The new definition for *powerful professional development* is a sharp departure from the sit and get (Sparks, 2002) or drive-by staff development (Joyner, 2000) activities offered in most school districts for the purpose of meeting the guidelines of the state or district. The old staff development activities have proven insufficient in preparing teachers for the aforementioned complex and richly layered context within which teaching decisions are made (Goodlad, 1990). Too much staff development has been imposed on teachers to meet guidelines or objectives that were set by administrators without teacher input, and too much staff development has been separate and apart from the day-to-day classroom needs of teachers and students. So what has been the effect of this behavioral approach? Many teachers have submitted to the routine of staff

development planned by someone else to merely get through the mandated activity, meet the requirement, and go back to their classroom, to teach as they have always taught (Joyner, 2000).

The new concept of *powerful professional development* reconnects with the *why* or moral purpose of education. Rather than a technical adjustment to the old concept of staff development, professional development reformed is substantive teaching as a moral activity (Fenstermacher, 1990) that focuses on teachers in a role of continuous learner with students in the school setting (Guskey, 2000; Senge, Cambron-McCabe, Lucas, Smith, Dutton, Kleiner, 2000). The new vision for the development and learning of teachers requires a new language to reconceptualize professional development as an ongoing *process* rather than a one-time activity.

The term *staff development* that had come to stand for seat time to meet a requirement, is often replaced with terms like *powerful professional development* (Sparks, 2002), *teacher learning* (Goodlad, 1990), *professional learning* (Sparks, 2002), *high-quality professional development* (Guskey, 2000), *continuous learning* (U.S. Department of Education, 1998), *personal and professional growth* (Senge, et. al, 2000), and *lifelong learning* (NBPTS Standards, 2001) in an effort to use language to facilitate a substantive transformation for reform rather than a technical adjustment to the concept of developing teachers in the profession. In the past the staff development event or inservice was the focus in determining what would qualify for staff development credit, but the new definition focuses attention on the end result of mastery teaching within a continuous *process* of developing qualities of effective teaching rather than the event itself (Guskey, 2000; Sparks, 2002). The new focus of *effective professional development* or *powerful professional development* is based on a consensus of research on learning that emphasizes professional development in the form of teacher study groups, teacher collaboratives,

networks, peer coaching, action research, mentoring and internships that are an ongoing process in the professional life of teachers (Sparks, 2002).

So how do leaders structure this new form of professional development for teachers and principals that "produces high levels of learning and performance for all students and staff members, and how do educators satisfy the public demand for accountability?" (Sparks, p. i-iv). In other words:

- What do teachers need to know and be able to do in order to prepare students for what they need to know and be able to do, and

- How do leaders ensure that teachers will put into practice what they have learned?

The National Board for Professional Teaching Standards (NBPTS) offers information, insight, standards and propositions to frame this discourse about teacher development. The NBPTS began its work in 1987 with the promise to create a national certification process for the teaching profession that would improve teaching practice and elevate the occupation of teaching to the status of a profession (NBPTS, 2001). In an effort to define accomplished teaching based on educational research findings the NBPTS (NBPTS Standards, 2001) developed a three-part mission statement:

- 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. (p. v)

Teacher candidates who voluntarily participate in the portfolio *process* for National Board Certification must convince evaluators that they can match their teaching

practice to the high and rigorous standards for the profession established by NBPTS.

From the time seven years ago that 86 teachers successfully completed the first process

for National Board Certification it has been advertised as an excellent professional

development experience. A NBPTS Board Member (1995-2003), in her introduction to

The National Board Certification Handbook, claims that the professional learning for

National Board candidates is profound, and the recognition that each teacher receives as a

master teacher validates a place of leadership for them within their schools, districts, and

nation (Barone, 2002). Michelle Forman, the 2001 National Teacher of the Year, said of

her triumphant completion of the process, "National Board Certification is the richest

professional development experience I've ever had and I spread that message every

chance I get" (*The Professional Standard*, Summer 2002, p. 6). The National Board for

Professional Teaching Standards guarantees that the end result of national certification

will be better teachers who are open to new ideas and consistently adjust their teaching to

the changing needs of students to assure improved learning for students across the nation

(Barone, 2002). The NBPTS believes that teachers should "approach self-renewal by

exploring new resources; studying professional literature; and participating in the

professional development experiences, professional organizations, and advanced

education programs" (National Board for Professional Teaching Standards, 2001, p. 59).

     The primary difference between the traditional definition of staff development

and the new definition of powerful professional development promoted by the NBPTS is

the recognition of the value of teacher development through "continuous, job-embedded

critical reflection and inquiry for the purpose of improving instruction" (Moberly,

Conway, Girardeau & Ransdell, 2002, p. 160). Teachers keep a journal in which they

evaluate independent lesson instruction, but they move beyond self-assessment and

accountability by reflecting on their teaching. In the NBPTS process teachers reflect on

the lesson taught not only to analyze whether or not students learned the lesson, but how they know whether or not students learned, and what they will do next based upon their findings. As candidates for National Board Certification reflect on the NBPTS Standards they analyze ways their teaching matches the principles, and they develop language for discourse about teaching and learning that not only clarifies successful practice in their own minds, but enables NBCTs to engage in meaningful discussion about high-quality teaching with other teachers, educators and community members.

The Statement of the Problem

The National Commission on Teaching and America's Future (1997) led by Linda Darling-Hammond, executive director, cites research studies which recognized teacher expertise as the single most important factor influencing student learning. For the National Board for Professional Teaching Standards (NBPTS) the development of high and rigorous standards for a *powerful professional development* process, engages the tension between the analysis of a process and the evaluation of student test score outcomes. Paradoxically, the *accountability* demanded by a society that requires proof of learning threatens to reduce the complex nature of teaching to a prescriptive check list of accomplished practice indicators. Likewise, the demand for higher student test scores threatens to interrupt the understanding of an enhancement of teacher practice that increases the authentic learning opportunity for students.

With student achievement in mind the National Board for Professional Teaching Standards (NBPTS) promotes high-quality teaching through professional standards for individual teachers across the nation. The NBPTS maintains that teachers who successfully complete the rigorous and relevant professional development process not only raise the profession to a higher level, but also become more reflective about their practice in ways that transfer to more effective student learning. The organization asserts

that the certification process for teachers who pass has a positive affect on students'

engagement, achievement, and motivation (Bacone, 2002). The NBPTS also states that

teachers who become National Board Certified Teachers are recognized as instructional

leaders and sought out for their ideas and opinions (National Board for Professional

Teaching Standards). National Board Certified Teachers have the opportunity to become

part of a national network for dialogue about what constitutes good teaching and good

opportunities for student learning.

  At the same time, some researchers are calling the NBPTS to account for the

millions of federal and state dollars spent since the process began ten years ago. Ballou

and Podgursky (1999) cite student test scores as evidence that National Board Certified

Teachers (NBCTs) are not really better teachers than their colleagues who are not

NBCTs, because their student test scores are no higher than students of teachers who are

not NBCTs. Indeed the year before Ballou and Podgursky's (1999) claims against the

effectiveness of the NBPTS process, the House Committee on Education and the

Workforce Chairman Bill Goodling (R-PA) (Anonymous, 1998) voted to strip NBPTS of

the proposed $18.5 million in FY 99 federal funding, arguing that the financial support

for the professional development process the NBPTS claims is *rigorous and relevant*

does not translate to higher student achievement and therefore is not worth all the funding

and hype. If the people of America are looking for a national program that enhances

individual teacher's practice within the profession in such a way that schools advance the

educational experience for students, then the previously mentioned researchers would

lead us to believe that the search for such a reform initiative should continue (Ballou &

Podgursky, 1999).

  These two opposing views of the significance of the NBPTS process exist

because of differing perspectives on assessing the effectiveness of the NBPTS process as

a catalyst for deep change. One view focuses on the continuing debate surrounding testing which targets student outcomes that are quantified and documented by test scores. The other view directs attention to the NBPTS process which recognizes accomplished teachers who continuously engage in a process for *powerful professional development* that is exemplified by dialogue, inquiry, reflection, collaboration and persistence in refining their practice motivated by the desire to equip children for a changing future (National Board for Professional Teaching Standards, 2001).

Rather than entering the debate about student test scores and outcomes, my purpose was to shift the focus of this study away from the limitations of the behavioristic, technical evaluation of test scores and numbers to processes and a more far reaching, substantive meaning. I argue that exploring teachers' perspectives exemplified by dialogue, inquiry, reflection, collaboration and persistence in refining their practice is another way to understand accomplished teaching that makes a difference in student learning. The processes of dialogue, inquiry, reflection, collaboration and persistence in refining practice for student learning combine to explain *powerful professional development* in terms of perpetuation theory and network analysis by examining teachers' perceptions about the ways in which networks encourage relevant new ideas and support for the rigorous processes of developing teaching practice. Exploring Granovetter's (1973, 1983, 1995) strong and weak ties sheds light on the connections between *weak ties* and the persistent ability to risk change in order to grow and improve practice. Granovetter's *weak ties* (1973, 1983, 1995) are the informal interpersonal networks of friends and acquaintances through whom information, influence and opportunities are dispersed.

Purpose of the Study

Through the analytical lenses of perpetuation theory (Wells & Crain, 1994) and network analysis (Granovetter, 1973, 1976, 1995), the purpose of this study was to explore individual teacher's perspectives of their openness to new ideas through inquiry and reflection, networking with other teachers, and persistence in refining their practice in order to understand accomplished teaching that makes a difference in student learning. This purpose was achieved through the following:

1. Describe teachers' perceptions of the process for National Board Certification and its impact;

2. Analyze National Board Certified teachers' perception of changes in their practice through the lenses of perpetuation theory (Wells & Crain, 1994) and network analysis (Granovetter, 1973, 1976, 1995);

3. Report other realities revealed; and

4. Assess the usefulness of these lenses for explaining these perspectives.

Theoretical Framework

Perpetuation theory (Wells & Crain, 1994) was used as a conceptual framework and mode of inquiry for this study, and network analysis (Emirbayer & Goodwin, 1994; Granovetter, 1973, 1976, 1995) serves as a structural framework. Perpetuation theory provides a useful method for examining relationships or ties within a networking context. When investigating social change, network analysis offers insights that allow the examination of the relationships or ties members of groups can have with each other. Both theories are useful within a naturalistic inquiry approach and together will provide a useful lens for examining the professional growth and enculturation of teachers.

Perpetuation Theory

Braddock (1980) originally developed perpetuation theory, a micro-macro sociological theory of racial segregation, as a tool to investigate and to enhance an understanding of the tendency of black Americans to perpetuate racial segregation. Drawing on Pettigrew's research on social inertia and avoidance learning, Braddock (1980) found in his research that minority students who have little or no experience with the realities of desegregation have a tendency to overestimate the hostility that individuals might display toward them at the same time they underestimate their own skill in coping with the stress of interracial encounters and relationships. Braddock found that both the lack of confidence in the friendliness of members of another race and the lack of confidence in their own ability to withstand the anticipated hostility causes minority students to avoid contact outside their own race. This explains why Blacks who have grown up in segregated settings have a predilection to remain in segregated settings when they become adults (Braddock, 1980).

Wells and Crain (1994) expanded on Braddock's theory of perpetual segregation by considering it alongside network analysis to add a more structural argument that segregation is perpetuated across generations because "African-Americans and Latinos lack access to informational networks that provide information about, and entrance to, desegregated institutions and employment" (Wells & Crain, 1994, p. 533). Wells and Crain used network analysis as a structural explanation of perpetual segregation that complements "Braddock's writing on blacks' lack of information on which to test their racial beliefs" (Wells & Crain, 1994, p. 533). Granovetter's (1973, 1983, 1995) work emphasizes the importance of the *weak ties* or informal interpersonal networks, which might consist of acquaintances and friends of friends through whom information, influence, and other opportunities can be dispersed. These *weak ties* are the conductors of

the beneficial ideas that would otherwise be outside the individual's experience and without *weak ties* the information, influence, and opportunity for mobility might not reach him or her (Wells & Crain, 1994).

Individuals who have *strong ties* to segregated settings use the *strong ties* as the predominant frame of reference according to Granovetter (1973), and he further maintains that the strength of a tie is a combination of the "amount of time, the emotional intensity, the intimacy and the reciprocal services which characterize the tie" (p. 1361). *Strong ties* are usually found within subgroups or cliques and weak ties would most likely bridge between the subgroups through occasional interaction among members of other subgroups. McPartland and Braddock (1981) point out that an individual's goals and career decisions are strongly influenced by people with whom a group member has *strong ties*.

Perpetuation theory is useful in understanding the enculturation of members into particular groups or group settings when using Granovetter's (1973) measure of the strength of a tie—time, emotional intensity, intimacy, and reciprocal services. Members who have comparable backgrounds, beliefs, and practices would more easily form *strong ties* within a particular clique or subgroup, and conversely members who have disparate background, beliefs, and practices would develop *weak ties*. According to Wells and Crain (1994) *weak ties* then become the conduit of information through which new ways of thinking and behaving become possible. Granovetter's (1973) measure of the strength of a tie—time, emotional intensity, intimacy, and reciprocal services can be used to determine whether ties are strong or weak.

This framework is assistive in explaining the anomaly of differing perspectives about the value of the NBPTS process as a catalyst for ongoing change in teaching practice. When *strong ties* are identified in the interviewee's transcript they indicate a

tendency to resist change. Conversely, *weak ties* indicate that individual teachers are open

to new ideas and willing to grow and develop their practice in order to improve student

learning.

Network Analysis

      In varying degrees of theoretical sophistication network analysis uses a broad

strategy for investigating societal structure in order to understand the relationships among

culture, agency and social structure (Emirbayer & Goodwin, 1994). Network analysis

originates from particular basic theoretical presuppositions and premises that are widely

accepted by its practitioners. According to Emirbayer and Goodwin (1994):

> It [network analysis] holds to a set of implicit assumptions about fundamental
>
> issues in sociological analysis such as the relationship between the individual and
>
> society, the relationship between "micro" and macro," and the structuring of
>
> social action by objective, "supra-individual" patterns of social relationships. (p.
>
> 1414)

      Emirbayer and Goodwin (1994), in their assessment and critique of network

analysis, emphasize its departure in important ways from the sociological approach to

empirical quantitative research with a number of qualitative community studies

influenced in large part by the Chicago School and the writings of Robert Park

(Emirbayer & Goodwin, 1994). Different models in the network literature can be applied

to processes such as diffusion of innovations and educational attainment— "as well as the

more typical processes of crowd behavior and social movements" (Granovetter, 1978, p.

1421). The profession of teaching could be either a network for processes such as the

diffusion of innovations or an unyeilding culture of isolation. Social facts are regarded by

most social theorists as "ecologically embedded within specific contexts of time and

space—that is to say, within particular interactional fields composed of concrete,

historically specific natural areas and natural histories" (Emirbayer & Goodwin, 1994, p. 1415). The question here is, "Can a profession of teaching foster a climate of continuous professional development and innovation or is the overall culture of teaching more likely to resist change?"

In analyzing the meaning of the *micro-structure* or a social structure involving cliques consideration must be given to the hierarchy and the influence of the culture upon individual action and ideas. "Where a teachers' clique is dominated by a particular teaching philosophy, for example, one might expect classroom practices consistent with this philosophy to receive strong social support" (Granovetter, 1995, p. 82). Social relations are important in network analysis where teachers in schools can receive social support for their practices and feel pressure to maintain them (Granovetter, 1995).

In the *threshold* model of collective behavior, binary decisions are considered "where an actor has two distinct and mutually exclusive behavioral alternatives" (Granovetter, 1978, p. 1422). The threshold is the point where the individual perceives that the benefits to participation in a particular thing transcend the costs (Granovetter, 1978). Granovetter uses participation in a riot as an analogy for interpreting the threshold where a person would decide that involvement in the riot was of more benefit than the cost of taking part.

In this study, network analysis is used to illuminate the understanding of the extent to which NBCTs' philosophies are supported by the *micro-structure* or "clique" of the group of teachers with whom the interviewee spends the most time, and assisted in determining the extent to which the interviewees perceive that their group influences them to continue to match their practice to the standards of the NBPTS. Network analysis was also a useful tool in exploring the concept of the *threshold* where the interviewee

made the decision to continue or not to continue matching their practice to the rigorous

NBPTS Standards.

<div align="center">Procedures</div>

A qualitative approach was used to identify ways *powerful professional*

development exists in the process for National Board Certification. Naturalistic inquiry

(Patton, 2002) was used to interpret information obtained through semi-structured

interviews, a collection of documents, and observations. In this method the interviews

provided data, tentative meaning was applied to the data, member checking provided new

data and clarification, and the new data was analyzed and meaning revised (Merriam,

2001). The benefit of a well-conceived strategy like naturalistic inquiry is the direction

and framework it provides for decision making and action (Patton, 2002).

Guba and Lincoln (1998) use the term *constructivism* synonymously with

naturalistic inquiry which they had earlier described as a "discovery-oriented" approach

in which the researcher minimizes manipulation of the research setting and does not

decide in advance what the outcome of the inquiry or study will be. Through naturalistic

inquiry processes the researcher attempts to provide solutions to daily problems. Guba

and Lincoln (1989) note the applications of naturalistic approaches through *exploration*

(discovery/verification), *description* (rich contextual information), *illustration* (exemplify

what has been uncovered), and *realization* (make it real).

In this study I, the researcher, used naturalistic inquiry as both a way of thinking

and as a technique that focuses on the meaning derived within a context (Guba &

Lincoln, 1989). As a technique, I used naturalistic inquiry processes such as observing,

recording, analyzing, reflecting, dialoguing, and rethinking to create understanding of the

interviewees' perspectives within a group of teachers (Guba & Lincoln, 1998). I used

network analysis as a structure for analyzing each individual's understanding of and

moral commitment to a movement or an organization's goals (Emirbayer & Goodwin, 1994). The organization in this case is the National Board for Professional teaching standards.

Researcher

I, the researcher, have been involved in education for the past 32 years in several different settings and on various levels. I have taught all subjects in public school grades K-5 for more than 18 years, worked with private preschool for 4 years, and served as a curriculum and professional development administrator for 10 years. At the time of this writing my role is that of a leader in professional development for both a particular school district and a state region. My beliefs about education have been influenced by relationships and contacts with professors, colleagues, and friends in my personal life experiences, my education, and my career experiences.

Based on my experience as a student, teacher, and administrator, I assume that educators within the profession develop a personal philosophy of education that guides their practice. I presume that this philosophy is continuously honed and developed through socialization and career experiences. I believe that teachers who voluntarily participate in the National Board Certification process can use the opportunity as a catalyst to improve their practice in ways that also improve student learning or they can go through the process without changing their practice. I also believe that some teachers might practice to the standards of the National Board for Professional Teaching Standards before participating in the process.

From the beginning of the research process to the end I have attempted to be aware of my views and strive to keep who I am and what I think from having a significant influence on my research (Patton, 2002). My own philosophy and beliefs are a lens that can affect the way I see the problem in this study, the way I analyze the data,

and my explanation of the findings (Merriam, 2001). Influenced by my readings, I took special care to measure the data against the literature and theory rather than my own perspectives, preferences, and assumptions (Guba & Lincoln, 1998; Patton, 2002).

Data Needs and Sources

The data for this study was collected from interviews with at least 4 National Board Certified Teachers who had successfully completed the process within the past 5 years. A purposive sample was chosen to include Pre-school through twelfth grade teachers with varying years of experience, at different grade levels and within a variety of certificate areas. Interview protocols were used to ensure that comparable data would be collected across the 4 teachers. These protocols included questions about general characteristics about the National Board Certified Teachers and their teaching, the NBCTs' perceptions of their own practice and how it might have changed as a result of participation in National Board Certification. I also considered how relationships with other NBCTs affected the continuation of the teaching standards supported by the National Board for Professional Teaching Standards. The interview questions were open ended, and interviews ranged from 45 minutes to 2 hours; all were tape-recorded and transcribed. Based on an analysis of the first interview I conducted a follow-up interview and member checking to ensure the accuracy of the transcription.

In addition to data collected through interview transcriptions and member checking data was collected through other sources and documents that include the NBPTS standards, NSDC standards, newspaper articles, journal articles, news broadcasts, and NBPTS bulletins and websites which address teaching, professional development, and student learning concerns.

Data Collection

I, the researcher, acted as the research instrument (Guba & Lincoln, 1998) in gathering information from participants through semi-structured interviews (Merriam, 2001, p. 73), and a collection of documents (Rubin & Rubin, 1995). The interviews were conducted, audio taped, transcribed, and analyzed for developing themes. The interview questions spoke to the key components of *powerful professional development* for improving student learning identified in the NBPTS standards for professional development and were analyzed to determine the individual teacher's perception of their role in the classroom. The interview questions and protocol are included in Appendix A.

Follow-up interviews provided additional information for analysis and provided clarification and redirection, as well as greater insight about the professional growth resulting from the National Board Certification process and its effect on NBCTs' practice (Patton, 2002). The teachers' insights, assumptions, and beliefs are reflected in my presentation and interpretations for readers of what occurred during this inquiry (Merriam, 2001).

Information was collected from documents by downloading from the NBPTS website the latest standards from the NBPTS in each of the certification areas, the newsletters, research studies, journal articles, and press releases about NBPTS and the process. The newest documents about powerful professional development were collected from the National Staff Development Council website.

Before proceeding with this study I submitted my proposal for approval from the Oklahoma State University Institutional Review Board and include a copy of the Institutional Review Board approval form in Appendix D of this dissertation.

Data Analysis

According to Wolcott (2001), analysis refers to a rather specialized way of transforming data beyond a descriptive account. Through careful and systematic attention to the data, key factors and key relationships are identified cautiously and in a controlled manner. Wolcott (2001) emphasizes a search for themes and patterns through systematic procedures that identify essential features and relationships.

Information obtained through semi-structured interviews in this study were tape recorded, transcribed, carefully analyzed for meaning, and submitted to interviewees for checking. Further questions and probes were developed based on the findings. It is important to review information about the emerging themes and domains found in the data provided by the teacher interviewee (Merriam, 2001), and this information was included in probes and questions presented to the next teacher interviewed (Guba & Lincoln, 1989). The review of information about emerging themes and domains is what Wolcott (2001) calls content analysis where material can be chunked into categories. In addition to member checking for accuracy in what respondents intend (Mertens, 1998), a review of information was submitted for advice from advisor and dissertation committee members on decisions to be made about the direction and interpretation of the study (Wolcott, 2001).

Relationships or "strong and weak ties" were analyzed through the hermeneutic dialectic circular process of further interviews and literature reseach informed by the teacher interviews (Guba & Lincoln, 1989). Coding and categorization of teacher statements about their ties to other teachers were used to determine the strength of the tie by using Granovetter's (1973) four factors of "amount of time, the emotional intensity, the intimacy and the reciprocal services which charaterize the tie" (p. 1361).

Commonalities and dissimilarities between individuals were analyzed to determine the strong ties which would most likely be found within subgroups or cliques and weak ties which would most likely bridge between the subgroups through occasional interaction among members of other subgroups. Braddock and McPartland (1981) point out that an individual's goals and career decisions are strongly influenced by people with whom a group member has strong ties. The four components of ties—reciprocity, intimacy, intensity and time—can be expanded and included in the discussion.

Research Criteria

To assure the trustworthiness of a qualitative study certain research criteria must be met. Trustworthiness in a qualitative study must meet the criteria of credibility, transferability, and confirmability (Guba & Lincoln, 1998; Mertens, 1998).

Credibility. Credibility of a qualitative study according to Guba and Lincoln (1998) is the relationship between the constructed realities generated by the respondents and the interpretation and transmittance of those realities by the researcher.

Rubin and Rubin (1995) talk about credibility in a way that makes it easier to check, therefore I choose their approach. To ensure credibility I designed my study giving attention to transparency, consistency-coherence, and communicability (Rubin & Rubin, 1995). According to Rubin and Rubin (1995):

Transparency means that readers of the qualitative research report will be able to see:

- the basic processes for data collection,

- will be able to assess the intellectual strengths and weaknesses, the biases, and the conscientiousness of the interviewer,

- and understand the original records of notes and recordings including the transcripts of interviews, member checking of the transcripts making note of any edited versions, and,

- a dated notebook or log separate from the rest of the interview notes detailing the how, when, where and why of the research and research decisions to provide evidence of careful methods so that the research can be confirmed (Rubin & Rubin, 1995).

Consistency and triangulation (Mertens, 1998) is dependent upon checking out ideas and responses that appear to be inconsistent within and across interviews or sources of data, and coherence means that themes were checked out across interviews. To check at this level of coherence means that I had to ask for deeper and more detailed responses than those originally given (Rubin & Rubin, 1995) and check them against information and evidence from other sources (Mertens, 1998). Communicability is a picture of the context or research arena that is given so vividly that other researchers can understand the text, because of the richness of detail, abundance of evidence and clarity of description (Rubin & Rubin, 1995).

To achieve credibility in this study member checks and peer debriefing (Mertens, 1998) were used. Dr. Adrienne Hyle, my dissertation advisor provided the peer debriefing as the outside professional. She analyzed the inquiry, provided feedback about the findings and interpretations, and challenged, refined, and redirected the inquiry as necessary. I conducted member checks with the participants by having interviewees check their interview transcript and my translation and interpretations during the process of the inquiry as well as upon the completion of the study.

Transferability

Transferability refers to the degree to which an inquiry's findings can be applied to other situations and other respondents (Guba & Lincoln, 1998). It is my responsibility

as the researcher to give such a thick description of the time, place, context, and culture that the reader is able to "determine the degree of similarity between the study site and the receiving context" (Mertens, 1998, pp.182-183). One of the best examples of thick description in qualitative research is Sara Lawrence Lightfoot's (1983) book, *The Good High School,* and it served as a worthy reference for understanding the value of thick description of the National Board Certified Teachers and contexts within this research.

Confirmability

Guba and Lincoln (1998) describe confirmability as the qualitative parallel of the quantitative term of objectivity. Objectivity means that the research is designed and conducted in a way to reduce the researcher's influence. In this qualitative study it means that all of the research details and logical decision making can be traced to the original source through journals, logs, and transcripts of interviews to determine if the conclusions of the researcher are supported by the data.

Significance of the Study

While the body of research about the National Board Certification process is increasing, minimal research has addressed the effectiveness of the NBC process as powerful professional development that can bring about deep change in teacher practice for increased student learning. Professional development planners need more information about ways to design professional development that works as a catalyst for change in the practice of individual teachers. The findings from this study yield significant results to the areas of theory, research, and practice.

Theory

Network analysis and perpetuation theory combine to formulate truths, expose meaning and provide an explanation for the enculturation and interaction of members within a group. Network analysis guides the uncovering of meanings in stories and

narratives as well as exposing the meaning found in narrative for individual capacity for growth and change for members within the group. Strong and weak ties as presented by Granovetter (1995) offer guidance in representing and analyzing the interaction of members within a group. This study clarifies and augments network analysis and perpetuation theory as it may be applied in educational or professional settings.

Research

The bulk of research about the National Board Certification process has been limited to quantitative surveys about professional development. Surveys make generalizations about NBCTs that might not be true for particular National Board Certified Teachers, and quantitative surveys seldom reveal the specifics of how experience within the professional development process contributed to a teacher's success. This qualitative approach using a case study method (Stake, 1995) for interpretation uncovers information about the process through interviews. Do NBPTS certified teachers continue to use reflective practice to improve instruction, and how do they believe students are benefiting from the changes in their practice?

Practice

Generally, the results from this study are intended to increase knowledge of effective professional development programs, especially those which involve teachers in a process of continuous inquiry about their own practice. More specifically, information collected in this study contributes knowledge about how particular, skillful teachers perceive the ways their continuous growth improves student learning in their classrooms.

Summary

Using network analysis and perpetuation theory as analytical research lenses, the purpose of this qualitative research study was to examine the relationships, perceptions, and understandings that exist among National Board Certified Teachers through interviews to

determine the ways in which perceptions of their experiences match the National Staff

Development Council standards for powerful professional development that acts as a

catalyst for the kind of deep change in practice that translates to continuous improvement in

student learning. (Sparks, 2002). In addition, I will work to identify the potential influence

these relationships, perceptions and understandings have on the meanings for planning and

implementing *powerful professional development*. *Powerful professional development* is

based on the belief that a better understanding of *what* teachers are to teach, *how* they need

to teach the subject, and *what* needs to be done to support teachers in the ongoing processes

for deep change over time involves openness to new ideas and continuous dialogue,

inquiry, reflection, and collaboration (Hawley & Valli, 1999; Sparks, 2002; Sparks &

Hirsch, 1997; Sullivan & Drury, 2002; Sykes, 1999).

Perpetuation theory provided the lens through which the examination of social

networks of strong and weak ties were represented in the interview data. Qualitative

methods were used sharing the essential characteristics of qualitative research— "the goal

of eliciting understanding and meaning, the researcher as primary instrument of data

collection and analysis, the use of fieldwork, an inductive orientation to analysis, and

findings that are richly descriptive" (Merriam, 2001, p. 11).

CHAPTER II

LITERATURE REVIEW

If we were to pay close attention to the excellent education models and to the

excellent teacher education models, we could discern the elements of a strategy

for the design for powerful staff development; that is, staff development where

teachers are trained in a way that the students of those trained perform at levels

of excellence. (Hilliard, 1997, p. 3)

This chapter review of literature examines studies and meta-analyses of studies

related to professional development in a quest for powerful professional development;

that is, as Hilliard (1997) states, where the teachers who participate in such

development have students who perform at levels of excellence. First, the review

begins with the definition and processes of powerful professional development within

research framed by seemingly incompatible dichotomies. Second, the review describes

research that supports the process for National Board Certification as powerful

professional development as well as research that challenges the value of the NBPTS

process. Third, this review addresses the theoretical foundations for change in teacher

practice to be achieved through the application of perpetuation theory and network

analysis to National Board Certified Teachers' perceptions of their experience and

current practice.

Definition and Dichotomies of Professional Development

Guskey (2000) defines professional development "as those processes and

activities designed to enhance the professional knowledge, skills, and attitudes of

educators so that they might, in turn, improve the learning of students. In some cases, it

also involves learning how to redesign educational structures and cultures" (p. 16).

Hilliard (1997) promotes powerful professional development that increases teacher

knowledge that helps students perform at levels of excellence. In keeping with Guskey

(1995; 2000) and Hilliard (1997), Sparks (2002), makes the case for powerful

professional development with a simple three-part premise:

> First, quality teaching makes a difference in student learning. Second, the
>
> professional learning of teacher and principal is a central factor in determining
>
> the quality of teaching. And third, district structures and culture that surround
>
> the school play a critical role in determining the quality of professional
>
> learning experienced by teachers and principals. (p. 1)

If educators assume that Guskey (2000), Hilliard (1997), and Sparks (2000) are

correct in stating that student learning is effected by quality teaching, quality teaching

is influenced by effective and powerful professional development, and that district

structures and cultures play a critical role in determining the quality of professional

learning, then leaders have to ask, what does powerful professional development look

like in practice, and how do leaders help teachers change their practice in ways that

help students perform at levels of excellence?

This two-part question is not easily answered when we take a historical look at

professional development research. Research on powerful professional development

that promotes effective teaching has been approached in a number of different ways

that offer diverse perspectives. Drawing on Guskey (2000) for the frame, I present

some of the historical research on professional development framed in the following

seemingly incompatible dichotomies:

1. The first dichotomy presented by Guskey (2000) highlights the tension between researchers who insist upon professional development that is practitioner specific and focused on day-to-day activities in the classroom (McLaughlin, 1990; Weatherly & Lipsky, 1977; Wise, 1991) and researchers who conclude that emphasis on the individual teacher's needs may be detrimental to overall school reform efforts (Tye & Tye, 1984; Waugh & Punch, 1987).

2. The second dichotomy presented by Guskey (2000) highlights the tension between experts who stress that reforms in professional development must be initiated and facilitated at the school level by teachers and school-based staff (Joyce, McNair, Diaz & McKibbin, 1976; Lambert, 1988; Lawrence, 1974; Massarella, 1980) and experts who emphasize that the most successful programs are guided by a clear vision with a view beyond the classroom walls (Barth, 1991; Clune, 1991; Mann, 1986; Wade, 1984).

3. The third dichotomy presented highlights the tension between reviewers who argue that the most effective professional development efforts approach long-term change in a gradual and incremental fashion, not expecting too much change at one time (Doyle & Ponder, 1977; Fullan, 1985; Mann, 1978; Sparks, 1983) and reviewers who insist that leaders who demand short-term results provide the advantage of feedback that encourages enthusiastic continuance of the program reform efforts (Lortie, 1975; Schmoker, 1999).

From these three apparently incompatible dichotomies come three primary questions for school district leaders who plan and implement professional development.

1. Should leaders involve teachers in a process to customize professional development based on individual teacher and administrator needs or should leaders design professional development based on the needs of the school site or district?

2. Should leaders involve teachers and administrators at school sites in planning and implementing professional development or should central office administrators initiate a professional development plan for the site and district?

3. Should leaders plan professional development for change that is slow and incremental, or should leaders plan professional development for change that is more radical and offers immediate feedback?

On the surface dichotomies like these and the questions they raise in the professional development literature can be confusing to leaders focused on designing and implementing processes to ensure continuous teacher learning (Guskey, 1995, 2000). I argue that researchers and experts in the field who search for one right answer to the problem of planning and implementing effective professional development will most likely find the answer elusive. The danger of insisting on one right answer for a powerful professional development model is that the search will never end, and leaders might decide that professional development is really a waste of time and money, because staff developers can never know for sure what will work. I argue that one size does not fit all in powerful professional development, and that there is no one best model. Instead, I argue for a way to implement meaningful professional development that has the power to change teacher practice and improve student engagement, achievement, and motivation. In order to help teachers grow professionally, leaders

need to use powerful professional development processes that can be adapted to unique settings.

Guskey (1995, 2000) and Sparks (1995, 2000, 2002) proclaim *context* as the key to understanding powerful professional development. Context is defined by DuFour (2001) as "the programs, procedures, beliefs, expectations and habits that constitute the norm for a given school—that plays the largest role in determining whether professional development efforts will have an impact on that school" (p. 14). In much of the research reported in the previous dichotomies researchers made an effort to eliminate the effects of context and in doing so have failed to address a critical issue: the uniqueness of the individual setting. Guskey (2000) remarks that what works best in one situation may not work well in another. I join DuFour (2001), Guskey (2000), Hilliard (1997), and Sparks (2002) in arguing that while some general principles for powerful professional development may apply from school to school, most principles and processes need to be adapted to the unique characteristics of the particular school and district setting. Educational contexts are complex and diverse, and this combination makes it virtually impossible for researchers to establish universal truths for powerful professional development without recognizing the importance of context (Guskey, 1993; Huberman, 1983, 1985).

Accepting the powerful influence of context reveals the ineffectiveness of the search for one right answer to a professional development model that works every time in every setting (Guskey, 2000: Sparks, 2002). What works best in professional development is actually an assortment of processes that must be adapted to unique settings in order to be useful in developing teachers who have the skills necessary to improve student learning (Guskey, 2000; Sparks, 2002).

Powerful Professional Development Processes

This section of this review considers research on four interconnected processes

for powerful professional development that can be adapted to diverse contexts:

dialogue, reflection, inquiry, and collaboration (Sparks, 2002; Sparks & Hirsch, 1997).

Dialogue

Dialogue is "a reflective learning process in which group members seek to

understand one another's viewpoints and deeply held assumptions" (Garmston &

Wellman, 1998, p. 32). According to Garmston and Wellman (1998) dialogue comes

from the Greek word *dialogos*. Dia means *through* and logos means *the word*. The

essence of dialogue is making meaning through words and it involves deep internal

reflection by each participant. Conversation can move either toward dialogue or

discussion, and it is important to understand the distinction Garmston and Wellman

(1998) make between dialogue and discussion. Dialogue differs from discussion in its

core intent to explore the feelings and underlying issues in an atmosphere of trust.

Discussion leads to decisions that will not change and can place participants in debates

where promoting a particular viewpoint becomes more important than the issues to be

considered. While discussion is important in a decisionmaking process, Garmston

(1998) notes that in a discussion participants may listen with the intent to hear the

errors or logical gaps in others' presentations in order to discredit the others' view and

promote their own. In many settings discussion can lead to verbal combat with winners

and losers where emotions interrupt the clarity of the issues and threaten relationships

between group members.

For a group to continue working together toward a decision, someone could

propose that the group switch to a *dialogue* format for a set period of time in order to

deepen understanding of the underlying issues important to the decision. An internal

skill in dialogue is *suspension* (Garmston & Wellman, 1998). *Suspension* means

listening intently to another's view of the issues without allowing one's own

perceptions, feelings, or judgments to interfere with the understanding to be gained

from the presentation (Garmston & Wellman, 1998). The purpose of using suspension

in dialogue is to better comprehend the issues without severing relationships. The

danger of suspension may be that an effort to preserve relationships in too comfortable

a setting could lead group members to circumvent the issues in order to maintain the

conviviality of the group (Garmston & Wellman, 1998). The optimum group process

for exploring educational issues is a setting in which the issues are addressed

effectively without severing the relationships of the members.

To demonstrate the enhanced problem-solving effectiveness of teachers who

learn the skills of dialogue and discussion, Garmston and Wellman (1998) give

evidence from members of an elementary school faculty who learned to transform

teacher talk into meaningful communication. Garmston and Wellman (1998) offer a

scenario of teachers who are shifting from discussion to dialogue in a problem-solving

session for the purpose of improving student learning and achievement. Since this is

what it looks like in practice, I am including Garmston and Wellman's (1998) figure as

an example for the application of dialogue in a professional setting in the following

Figure 1.

Figure 1

Shifting from Discussion to Dialogue (Garmston & Wellman, 1998, p. 34)

Discussion
"These test data point to a need to change our spelling program."
"I don't think it's the program; I think it's the test."
"I don't think it's either one; I think it's attitude."

Transition
"Wait a minute. This is sounding messier than it first looked. Can we shift to dialogue and explore our assumptions about what's going on with kids and spelling?"

Dialogue
"We seem to have three topics before us: test scores, kids' skills, and their attitude toward spelling tests. I'm wondering whether there are other elements in this mix."
"Help us understand what you think some of these other elements might be."

As this example shows, individuals who meet together to improve student learning must remain focused on the goal, suspend their own assumptions and beliefs, and use dialogue and discussion as tools for problem solving. According to Garmston and Wellman (1998), dialogue would not be possible without reflecting on the issues or elements that are relevant to the problem to be solved. As previously stated the four powerful professional development processes being considered in this review are interrelated and inextricably entwined; therefore, meaningful dialogue is impossible without the next process to be considered: reflection.

Reflection

Reflection is defined by Swain (1998) as "a tool for shaping thoughts, ideas, and beliefs, revealing concrete shape for those thoughts, ideas, and beliefs as they emerge" (p. 28). Reflection enables individuals to assess experiences, learn from

mistakes, and build on successes (Schon, 1987; Sparks, 2002; Stronge, 2002; Swain, 1998). As a professional development process reflection is a vehicle for teachers to clarify their thinking and challenge their beliefs about teaching and learning (Stronge, 2002; Swain, 1998). As a data source reflection enables teacher-researchers to consciously consider patterns of behavior that might otherwise remain concealed. Reflective thinking about lessons taught can inform not only the revision of lesson plans, but if reflection is woven into the school day activities, teachers can use reflection to continuously assess learning and improve practice (Hawley & Valli, 1999). Over time reflective thinking can become a habit in a teacher's process of professional growth. Schon (1987) depicts reflective practitioners as those who continuously use *inquiry* and analysis to refine instruction. Schon's research corresponds with several researchers (Collinson, Killeavy, & Stephenson, 1999; Cruickshank & Haefele, 2001; Stronge, 2002) who have determined that reflective practice is a characteristic of effective teachers.

So what can be used as evidence of reflection in a teacher's practice? Are personal ponderings enough or can specific criteria guide reflective assessment? The tension in attempting to define reflection or reflective thinking is between a vague definition and a reductionist checklist of behaviors. I argue that in order to talk about reflection, researchers, teachers, and professional developers need a clear definition, a common language, and perhaps a set of criteria to better understand reflection. However, those involved in reflection need to remember that reflection is a process rather than a rigid checklist of activities to follow religiously. To better define reflection this review will draw on Dewey who defined reflection for student learning, as he is translated and interpreted by Rodgers (2002). Rodgers (2002) returns to the

roots of reflection in Dewey to look at four distinct criteria that she believes

characterize Dewey's concept of reflection. The four criteria that Rodgers (1998) finds

in Dewey are summarized and enhanced in the following:

1. Reflection is a significant process that propels a learner from one

    learning experience to the next with a perception of its relationships

    with other learning. Rodgers (2002) states that reflection is the thread

    that makes continuous learning possible. According to Rodgers (2002)

    a learning experience must involve an *interaction* between an

    individual and his or her environment and the element of *continuity*.

2. Reflection is a systematic, rigorous, *disciplined* way of thinking, with

    its roots in scientific *inquiry*. Mere pondering would not be considered

    systematic, rigorous, or disciplined enough to be defined as reflection.

    In response to an experience, a reflective thinker would interpret the

    experience by naming the problem or question that arises out of the

    experience, generate possible explanations for the problem or question

    posed, shape some hypotheses, and experiment with or test the

    hypotheses (Rodgers, 2002).

3. Reflection needs to happen in *community* or interaction with others

    who value personal and intellectual growth. The community or

    network of professionals serves as a testing ground as an individual

    shapes his or her understanding of teaching and learning (Rodgers,

    2002).

4.   Reflection requires a guiding *attitude* of directness and open-

mindedness that values personal and intellectual growth (Rodgers,

2002).

In summary, reflection is continual interaction with experiences, a rigorous

process of disciplined thinking, a community or network of professionals who are

open-minded and value new ideas, and a personal attitude that values professional

growth (Rodgers, 2002; Stronge, 2002). Now that we have identified elements of

reflection, the question is: what does it look like in practice?

To better understand teacher reflection in practice Swain (1998) used a

reflective research process to study educators who were using a reflective model of

professional development. Seventeen teachers from nine schools participated in the

WONDER program, which was a program for teachers to learn how to implement

reading and writing workshop strategies with students. Swain (1998) selected four of

the 17 teachers to participate in reflective research. Several types of data were

collected from interviews, teacher logs, and observations to study the teacher

researchers' ongoing reflection processes and transformations. According to Swain

(1998) the teachers who participated in the study analyzed the collected data and

reflected on student learning in the classroom. An outside observer with experience in

using reflection to enhance the implementation process for teachers who were learning

to use reading and writing workshop participated in the interviews and classroom

observations. The teachers involved in the research studied the process of reflection

through writing, conversation, reading and viewing videotapes of their teaching.

Swain (1998) claims that teachers valued information gained from their

reflections about the effectiveness of classroom practice. They also valued their own

growth as reflective practitioners. By presenting excerpts of dialogue and journal

writing to document the teacher's changing attitudes and instructional practice, Swain

(1998) demonstrates teacher awareness and deep change that results from using the

reflective process. The picture Swain (1998) paints could be more complete if she used

rich description to paint a portrait of teachers before and after their experience in the

reflective process. Perhaps Swain could have given an analysis and comparison of the

participants' experiences as they implemented new learning processes for students so

that readers could better understand *how* the teachers' practice changed after

participating in the reflective processes. I am including an excerpt from Swain's (1998)

article as an example of one teacher's reflection on change in her practice in order to

analyze it using Rodgers' (2002) four criteria for reflection.

> I think one of the main things that WONDER did for me was to help me deeply
>
> reflect on what I'm doing. I was pleasantly surprised…[that] I was already
>
> doing a lot of positive things without realizing it. However, by deeply
>
> analyzing myself and my actions, I see a clearer direction of where I'm headed,
>
> and I can set goals for myself and my students beyond where I used to stop. In
>
> the past, self-reflection for me has been sort of a shallow thing. I thought I was
>
> reflecting on myself, but now, WONDER…has made me really stop and think
>
> and push myself to try more and more things. (Swain, 1998, p. 32)

Interaction and continuity are part of Rodgers' (2002) first criterion for

reflection. This quotation gives examples of a teacher using reflection to learn from her

teaching experience through *interaction* and *continuity* (Rodgers, 2002) in seeing more

clearly where she wants to go with her students after reflecting more deeply about

where students need to go. In this quote there is no evidence of the problem-solving

process of forming a hypothesis and analyzing the results as stated in Rodgers' (2002) second criteria of reflection. Reflection did appear to happen in community with others who valued professional growth which was Rodgers' (2002) third point about reflection. The aspect of community was documented by the previous description of the research processes (Swain, 1998). In this quotation there appears to be some indication of the fourth criteria of reflection presented by Rodgers (2002) and Strong (2002) in that the participant wanted to push herself to try new things and continue to grow as a professional.

The problem with reflection in most of the research reviewed is two-fold: most teachers do not know how to reflect in an effective way as defined by Rodgers' (2002) criteria derived from Dewey, and time for teacher reflection is not built into most school schedules (Guskey, 1995; Hawley & Valli, 1999; Sparks, 2002; Stronge, 2002). A simplistic explanation of the requirements for reflection appears to be that teachers need time to think and reflect on their teaching practice in community with other teachers. However, teachers first need to be guided and coached in order to increase their own understanding of what reflection looks like in practice. The missing piece in Swain's (1998) research appears to be the third criteria from Rodgers' (2002) list: stating a question or problem, then looking for answers. This deliberate quest for continuous improvement by stating problems and questions then developing plans for solving the problems and answering the questions should be understood by teachers as part of the professional role of teacher (Goodlad, 1990). The next section on *inquiry* will continue the *dialogue* and enhance the discussion of powerful professional development as a continuous quest for *reflective* teaching practice that improves student engagement, achievement, and motivation.

Inquiry

Inquiry is a systematic approach to professional development within a naturalistic model of change that continually examines practices, student learning, goals, and achievement for the purpose of adjusting practices (Richardson, 2003). Richardson (2003) suggests that an inquiry approach is based on the idea that "teachers have expertise that they can articulate, develop and share" (p. 405). In addition teachers confront dilemmas, problems, and puzzling questions continually. Many dilemmas are enduring, and the questions and problems to be solved never go away (Richardson, 2003). Teacher expertise and enduring dilemmas united with an orientation toward continuous improvement is purposeful change. Richardson (2003) develops an understanding of an inquiry approach to professional development that is systematic for purposes of addressing specific questions, dilemmas, and problems within teaching. The purpose of this approach to professional development is to improve the achievement, engagement, and motivation of student learning. The power of the inquiry approach is that it can not only change teacher practice in a way that increases student achievement, but teachers who participate in the process of the inquiry approach may change their underlying beliefs and assumptions about teaching and learning (Richardson, 2003).

The strength of the inquiry approach as professional development is that it can benefit experienced and novice teachers, old or young teachers, and male or female teachers (Richardson, 2003). The inquiry approach can be adapted to different contextual settings and research shows it to be useful in improving teacher practice for higher student achievement (Richardson, 2003). Richardson (2003) addresses the dilemma of using the inquiry approach as a district or school's only process for

professional development. According to Richardson (2003) a constant demand for a

collective approach to professional development is at odds with the norms of

individualism and independence within the professional act of teaching.

In a previous research project Richardson (2003) worked with teachers in their

classrooms to help them think about changes in their practice as they taught reading.

Not every teacher in the school worked with the researchers, and teachers involved in

the project did not work with each other in her previous study. Richardson (2003)

reports that the results of this research were that reading scores improved for the

students of the teachers who participated in the inquiry approach for staff development.

However, in spite of the success of previous research projects using the inquiry

approach with individual teachers, Richardson (2003) advocates a mixed model of

professional development that includes individual inquiry but adds the dimension of

sharing the inquiry results with other teachers. Richardson (2003) argues for staff

development that includes a collective approach of sharing findings from the inquiry

process between and among teachers within a school, because students move from

grade to grade and teacher to teacher within a school. She reasons that some problems

are best solved by teachers who work together and provide consistency for students as

they move from grade to grade (Richardson, 2003).

Richardson (2003) refers to King and Newmann's research on school reform

and building capacity in schools. King and Newmann examined staff development

using the inquiry approach in a number of high-capacity schools in low-income

settings. King decided that an inquiry approach would have the following

characteristics:

1. teachers have considerable control over process and content;

2. teachers critically discuss issues of school mission, curriculum, instruction, or student learning;

3. teachers draw on relevant data and research to inform deliberations; and

4. teachers sustain a focus on a topic or problem and reach a collective decision. (Richardson, 2003, p. 406)

The first characteristic of an inquiry approach to professional development leads to the first obstacle. Many leaders, even enlightened leaders, do not perceive that teachers have the expertise to allow them to control process and content. In an age of standards and high stakes testing leaders find it difficult to give teachers control of process and content, because they lack confidence in the teacher's capacity to make the judgments about content and process that will ensure student success on high stakes tests. Sometimes teachers feel so much pressure to ensure a high level of student achievement that instruction becomes shallow and narrow in scope (Miller, 2002).

Sheldon and Biddle (1998) recall evidence from the 25 year tradition of Deci and Ryan's self-determination theory research, which brings to light the dangers associated with "rigid standards, narrow accountability, and tangible sanctions that can debase the motivations and performances of teachers and students" (p. 164). Evidence from the Deci and Ryan study, according to Sheldon and Biddle (1998) indicates that teachers faced with reforms that stress rigid accountability may become so controlling that they are unresponsive to students' diverse and unique learning needs. Teachers who feel compelled to "cover" a large amount of disjointed bits of information to prepare students for standardized tests are likely to become rigid and controlling, and

that students who are focused on tests and test results may lose their natural curiosity and thirst for learning (Sheldon and Biddle, 1998).

Senge, Cambron-McCabe, Lucas, Smith, Dutton, and Kleiner, (2000) point out that students may fail to develop as life-long learners when teachers deliver a fragmentation of information that is bereft of deep meaning. While holding schools and teachers accountable for student learning is important, standards and high-stakes testing may in effect undermine deep learning. Senge et al. (2000) orient deep learning in the remembered moment when a teacher makes learning relevant to a student by powerfully connecting him or her to the learning experience in such a way that the student comes away changed. Deep learning has the potential for stimulating the student's natural drive for learning, which is a long-term goal of education. High-stakes testing backed by strong rewards and consequences may appear to hold schools accountable for student learning, but in reality high-stakes testing threatens deep, meaningful learning by holding teachers to a rigid script that does not allow teachers to follow student interest to a deeper level of meaning. So what can leaders do? I argue that leaders must give teachers the necessary *flexibility* to guide student learning, or else the enduring effect of high-stakes testing may be to extinguish the flame of passion teachers and students have for learning.

The second, third, and fourth characteristics of the inquiry approach for professional development assume that teachers would be supported by leaders who give time, support, and permission to teachers to make judgments about student achievement. Leaders pressured by high stakes testing and other demands may feel compelled to keep teachers under such tight control that an inquiry approach cannot be allowed, because it leaves too much to teacher decision. For example, a reading

program with highly scripted dialogue may appeal to leaders who want to make sure students score well on high stakes tests. Leaders may believe that if a program is written by experts and worked well in several other settings, then the proven program will work well in their schools. If all teachers follow the same script, leaders may reason, students will all get the same proven instruction. The down side of highly scripted programs is that there is very little room for teacher judgment and decision making that is necessary to adapt the learning for unique student needs (Richardson, 2003). Another limitation of highly scripted programs is that leaders do not often see a need for teacher professional development when they believe the program is fail-safe. In other words, leaders may reason that teachers do not need professional development if programs are structured in such a way as to remove the variability of teacher expertise or judgment.

In professional development the inquiry approach is multifaceted and plagued by ethical, structural, and cultural dilemmas that often act as barriers to the implementation of this process at the school site and across the district. Often there is little encouragement, time set aside for collaboration, money for release time or expert guides to assist teachers in an investigation of the effectiveness of their practice. Will teachers continue to practice the inquiry approach when the resources and support from school administrators, university professors, or grant resources are gone? If teachers continue to use the inquiry approach collectively, what are the factors that promote its ongoing implementation?

The dilemmas presented by the inquiry approach are also problematic within the next process for powerful professional development to be considered: *collaboration*. While collaboration has been assumed to be a part of the processes of

dialogue, reflection, and inquiry, it will be considered separately in order to focus on

the tension between collective and individual professional growth within school

contexts which have historically fostered teacher isolation and individualization.

Collaboration

Collaboration is probably the most used and least understood term of the four

professional development processes mentioned in this review. Generally, collaboration

is a process during which individuals and sometimes groups of individuals come

together to study and solve problems. Educational scholars believe collaboration holds

the key to school reform, but its implementation is often problematic. While

collaboration represents an educational good, the term is sometimes used ambiguously

by educational leaders for the following reasons:

1. Leaders want the school culture to appear to support teacher

   development and collaboration when in reality the school culture is

   oppressive to teacher growth (Gitlin, 1999; Hargreaves, 2000).

2. Groups do not often become knowledgeable or skilled in the processes

   for working effectively as a group which has a clear goal or objective

   related to school reform (Garmston, 2003).

3. The school culture promotes the principal as the primary decision

   maker and encourages teacher isolation and individualism (DuFour,

   2002; Hargreaves, 2000).

Rather than implement the kind of collaboration that increases student

achievement, leaders often put into action *contrived collaboration* (Gitlin, 1999). Gitlin

(1999) and Hargreaves (2000) use the term *contrived collaboration* to refer to

collaboration that is "administratively controlled, compulsory, implementation-

oriented, fixed in time and space, and predictable" (Gitlin, 1999, p. 633). This would be the kind of ambiguous collaboration which is more modernistic and fits into the hierarchical, factory model of school (Hargreaves, 2000). For instance, chosen teachers in groups of *contrived collaboration* know that either the principal has an outcome in mind, and teachers will not be allowed to end the decision making process until they *guess* what the principal has in mind; or the principal does not have a specific decision in mind, but the principal will know the right answer when he or she sees it, and teachers might as well come up with the right answer quickly. In other words contrived collaboration is merely going through the motions of a real process, when in reality teachers have little input.

Drawing on Hargreaves, Gitlin (1999) states that *contrived collaboration* overuses control in ways that delay, distract, and demean teachers who are striving to work together for better student learning. The bottom line is this: *contrived collegiality* hinders teacher growth and development and in turn student growth and development. In addition to hindering growth, if educators assume that this is a postmodern world, a modernistic use of control makes the culture of the school alien to and out of sync with the present society. So what should the school culture be, and how can educators promote the right environment for learning? Gitlin (1999), Hargreaves (1994), and Garmston (2003) address this issue.

Gitlin (1999) draws on Hargreaves (1994) as he describes a school context that supports *teacher collaboration*. Gitlin (1999) quotes Hargreaves (1994) in defining *teacher collaboration* as "spontaneous, voluntary, developmental, and pervasive across time and space, and unpredictable" (Gitlin, 1999, p.633). *Teacher collaboration* needs a more postmodern school culture in order to accomplish the purpose of group study,

decision making, and growth. Specifically, in this review, collaboration will refer to *teacher collaboration* as a professional development process. The purpose of *teacher collaboration* is to improve student learning by developing supportive teacher relationships or *networks* within the educational community in order to foster professional development, improve decision making and solve problems (Garmston, 2003; Gitlin, 1999; Timperley & Robinson, 1998).

The proper culture is important; however, culture alone may not promote effective teacher collaboration. The *teacher collaboration* process also needs teachers who are mature enough to trust each other, and members of the group need to be skilled and knowledgeable for improvements in student learning (Garmston, 2003). Garmston (2003) offers six domains of group development and states that self-assessment is critical to creating an adaptive school. Garmston (2003) suggests that each group needs to *reflect* on its work, self-assess itself in each domain, and focus on improving the targeted domains. The scale Garmston (2003) uses to evaluate each domain is: 1) beginning, 2) emerging, 3) developing, 4) integrating, and 5) innovating. The six domains and needed skills are condensed and summarized from Garmston's (2003) list in the following:

1. Getting work done. In this domain groups use ideas and skills to get work done efficiently and effectively. The skills needed are time conservation, meeting management, decision making, facilitation skills, and mastery of the proper use of discussion and dialogue.

2. Doing the right work. This domain requires congruence between goals, commitments, and actions for doing the most important work based on

test data and a growing applied knowledge base of pedagogy, curriculum, and how students learn.

3.   Working interdependently. People with different roles work as equals. Skills include the ability to assess oneself and others, positive intent, and the metacognitive skills of effective group membership, and working with conflict.

4.   Managing systems. Groups adept in this domain know when and how to set aside linear logic and think systematically. In this domain groups know when to use principles of linear and nonserial logic systems to improve schooling. Groups in this domain know how to get the greatest benefit for students with the least amount of energy.

5.   Developing interdependence. The essence of this domain is principles and tools for increasing collective effectiveness by distributing and developing leadership.

6.   Adapting to change. In a turbulent environment a group's energy must focus outward coping with inter-and intra-group conflict to work with both ordinary and unmanageable problems. (p. 72)

Time for groups to get together is a rarity in most schools. However, Garmston (2003) states that groups who do not have time for reflection and assessment do not have time to improve; this could be the key to the lack of success among school reform efforts. In today's schools teachers do not generally have time built into the day for groups to gather on a regular basis to consider ways to improve student learning, and even if they did it might be difficult for the group members to participate in group processes for decision making and professional growth when they feel pressured to

make quick decisions in response to class and school problems. Garmston (2003) makes good recommendations about groups and group processes; however, I argue that the structure of the school schedule and the school hierarchy are obstacles which must be overcome so that teachers and administrators can focus on improving student engagement, achievement, and motivation.

Before *dialogue, reflection, inquiry and collaboration processes* can become integral to the school culture, relationships must be built between teachers and among others that form the community of the school. Hargreaves (1995) and Fullan (1999) assert that developing and altering these relationships is the way to reculture the school. Hargreaves (1995) notes that, among teachers, two kinds of cultures have traditionally prevailed:

- *Cultures of individualism*, where teachers work in self-contained classrooms, seldom share ideas or resources, and only rarely engage in joint planning or problem solving.

- *Balkanized cultures*, where teachers work in self-contained subgroups ---such as departments divided into subject areas---are generally isolated from one another and may even compete for resources and favors from principals and other administrators. (Hargreaves 1995)

Professional relationships are fragmented and stifled by both individualism and balkanized cultures, but Hargreaves (1995) and Fullan (1999) argue that schools can be recultured. According to Hargreaves (1995) and Gitlin (1999), the answer to reculturing lies in building relationships of trust and *collaboration*. While Hargreaves (1995) and Fullan (1999) command a great deal of attention with research that promotes school collaboration, studies considered here (Gitlin, 1999; Swartz, 1984;

Timperley & Robinson, 1998), which also support *teacher collaboration* as a professional development process, are inconclusive about a developed model for professional development that would work continuously without a great deal of resources and support from within and without the school and district.

Here it is important to revisit the part of DuFour's (2001) definition that points out that context plays the largest role in determining whether professional development efforts will have an impact on a particular school. Without support from school leaders teacher collaboration may not be possible. Time and resources for collaboration are in short supply in schools, and these are probably the greatest obstacles to teacher collaboration. Once again the answer to why most school efforts in restructuring, reculturing, and reform are unsuccessful appears to be the difficulty leaders have committing scarce resources and scarce time to *teacher collaboration* for improving student learning.

Since it appears to be almost impossible to improve student learning through incorporating powerful professional development processes into the daily lives of teachers, is there anything that can make a difference?. Given the importance of context, does the NBPTS process work for successful candidates as a catalyst for change that improves student learning regardless of the "programs, procedures, beliefs, expectations and habits that constitute the norm for a given school?" (DuFour, 2001, p.14). These questions will be considered in the next section of this review.

The NBPTS Process

In this section of the review of literature is a description of the process for National Board Certification as professional development (Barone, 2002) and research about the NBPTS process presenting the pros and cons. First, this section will present

the powerful professional development processes—dialogue, reflection, inquiry, and collaboration—as they occur within the National Board for Professional Teaching Standards certification process. Second, this review will describe some research that depicts the National Board for Professional Teaching Standards certification process as valuable in promoting and recognizing teacher growth that improves student learning. Third, this review will present research that claims the NBPTS process is *not* valuable as teacher professional development, because it fails to advance student achievement.

Professional Development through the NBPTS Process

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredibility, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way—in short, the period was so far like the present period, that some of its nosiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only. (Charles Dickens, 1982, p. 1)

It is the best and worst of times for those who work with professional development, and all comparisons are in the superlative degree of comparison only (Dickens, 1982). There has never before in the history of education been a *greater* emphasis on the role professional development can play in improving student achievement to the *highest* standards (Guskey, 2000; Barone, 2002). The significance of powerful professional development as a catalyst for change is evidenced in every modern proposal to transform schools by improving teacher practice to an *excellent*

degree (Barone, 2002; Sparks, 2002). With student learning in mind the National Board

for Professional Teaching Standards promotes *accomplished* teaching through *rigorous*

professional standards for individual teachers across the nation (NBPTS, 2001).

The purpose of the National Board for Professional Teaching Standards is to

provide a way for the teaching profession to recognize highly accomplished teachers.

Teachers who successfully complete the certification process show that they know how

to make professional judgments about student learning needs and then to effectively act

on those judgments. The certification process involves a two-part assessment:

- A portfolio of video taped lessons and student work samples which

  represent the judgments about student learning and the impact of those

  judgments; and

- A written response that demonstrates knowledge or subject area

  content, teaching practice, curriculum design and student learning (The

  Center for the Future of Teaching and Learning, 2002).

The National Board for Professional Teaching Standards asserts that the

certification process for teachers who pass has a *superb* effect on students' engagement,

achievement, and motivation (Barone, 2002). According to the NBPTS, teachers who

match their practice to the standards incorporate dialogue, reflection, inquiry, and

collaboration as they collect evidence for their performance-based assessment portfolio

in their area of specialization. This is verified in the Early Childhood Generalist

NBPTS Standard VIII: Professional Partnerships and Standard IX: Reflective Practice.

First, Standard VIII: Professional Partnerships appraises teachers' ability to

provide evidence in their portfolio of the ways they work collaboratively with others to

"construct curricula, implement instruction, and design assessments" (NBPTS

Standards, 2001, p. 55). Standard VIII encourages teachers to overcome isolation and

work collaboratively to make the school a community of learners. More specifically,

Standard VIII: Professional Partnerships suggests that teachers contribute their

observations and insights about their classroom by way of presentations or discussions

with other teachers. Accomplished teachers are to describe implications for change in

practice that are gleaned from the insights of staff from other disciplines and grade

levels as well as teachers who teach on the same grade level. Standard VIII also

encourages teachers to develop regular forums for talking with peers about how to

improve their collective efforts, to give evidence that they can reconcile conflicts with

colleagues, and to contribute effectively to assessment teams and other processes with

professionals.

Second, Standard IX: Reflective Practice assesses teachers' ability to reflect on

their practice in order to continuously broaden their knowledge base, improve their

teaching, and refine their evolving philosophy of education. Teachers are to give

evidence of the ways they used the knowledge gained from this self-assessment to

analyze, synthesize and refine their teaching practice. Accomplished teachers should

show ways that their growing knowledge base guides their goal setting, acts as a basis

for decision making, and influences their curricular choices. National Board Candidates

must demonstrate that they understand the impact of specific lessons, strategies,

assignments, and assessments vary from class to class as the mix of children changes.

In summary accomplished teachers demonstrate their capacity for ongoing,

dispassionate self-examination; their openness to new ideas; and their willingness to

change in order to promote student learning.

Standard VIII and Standard IX incorporate the four powerful professional development processes of *dialogue, reflection, inquiry, and collaboration*. Since relationships and professional partnerships must be demonstrated, school culture is a peripheral consideration of the professional development process for teachers who successfully complete the requirements for National Board Certification. As argued earlier, context is important in assuring the continuation of powerful professional development processes that continuously adjust practice to the learning needs of students. Do teachers who have successfully completed the NBPTS process continue to incorporate the powerful professional development processes of dialogue, reflection, inquiry, and collaboration in their day to day practice? If National Board Certified teachers continue the processes after certification; how long do they continue?

Research and the NBPTS Process

This part of the review continues the dialogue about powerful professional development that incorporates the processes of dialogue, reflection, inquiry, and collaboration in teachers' day to day practice with a focus on the NBPTS process for certification. The overall question for the next two sections is; what does research reveal about the NBPTS process as a catalyst for change in teacher practice and student learning? The focus in this section will be on favorable and unfavorable NBPTS research with teachers and assessors who have been involved with the NBPTS process that claims to endorse practice in ways that improve student engagement, achievement, and motivation.

Research that Supports the NBPTS Process

The majority of studies which have been sponsored or supported in some way by the NBPTS have been in the form of surveys sent to successful National Board

Candidates. Two major studies that were joint efforts of NBPTS and other

organizations were the Charlotte Collaborative Project and the Certification System of

the National Board for Professional Teaching Standards: A Construct and

Consequential Validity Study. Both of the major studies were conducted with National

Board Certified Teachers in North Carolina.

The survey studies that I found began in 1999 with letters and requests for

input sent to every successful National Board teacher up to that time. One particular

survey was also sent to teachers who act as assessors for the process. The assessors

must satisfactorily complete intensive training before they are allowed to become an

assessor; however, assessors do not need to be National Board Certified Teachers. The

surveys basically ask teachers who have completed the process to agree or disagree

with several questions. Through the surveys basically teachers respond positively to

questions about the benefit of the NBPTS process as professional development. Other

survey questions report that professional involvement increases with National Board

Certification. The NBPTS has received a great deal of criticism for the studies that

detractors call *feel good* research, because it does not assess student achievement for

students of National Board Certified teachers.

The NBPTS Certification System: A Construct and Consequential Validity

Study stated that its purpose was to subject the NBPTS system of advanced teacher

certification to a comprehensive construct validation. A fairly large research team

composed of university researchers, teacher educators, assistant principals, curriculum

specialists, and highly experienced practicing and retired English language arts and

primary/middle school generalist teachers used the National Board's five propositions

to guide their study. The sample consisted of 65 teachers from two certificate areas:

early adolescence/English language arts and middle childhood/generalist. All teachers in the sample had attempted National Board Certification. Thirty-four of the teachers in the sample were early adolescence/English language arts teachers 13 of whom were certified with 21 not certified. Middle childhood/generalist candidates comprised 31 of the teachers in the sample. Eighteen were certified and 13 were not certified.

The design of the study was informed by a comprehensive review of literature that focused on expert/novice comparisons, comparative teaching practices, and studies of schooling effects and outcomes. From the literature analysis 15 dimensions were identified to compare the two groups. Thirteen of the dimensions were attributes of excellent teachers with two dimensions considered as indices of student learning.

Data came from scripted interviews of the teachers and their students, observational visits to the teachers' classrooms, lesson plans, and student products and artifacts tied to the lessons observed during the classroom visits. All of the information was obtained without knowledge of the teachers' certification status. Trained assessors evaluated the student writing response to the instructional assignment using a scoring taxonomy designed to assess each student's depth of understanding.

According to the research report, students of the successful NBPTS candidates appeared to exhibit an understanding of the concepts targeted in instruction that is more integrated, more coherent, and at a higher level of abstraction than understandings achieved by other students. Writing scores of students of National Board Certified middle childhood/generalist teachers were higher and statistically significant in comparison with non-board certified teachers' students. Differences in writing scores for students of early adolescence/English language arts teachers who were National Board Certified may not have been statistically significant.

In the number and variety of professional activities (taking advantage of professional development opportunities) there was no discernable difference between the National Board Certified Teachers and their non-certified counterparts. The researchers suggested that increasing numbers and visibility of National Board Certified teachers might help to change this finding.

Research that Questions the Value of the NBPTS Process

Along with the acknowledgment of the importance of professional development, legislators, policy makers, funding agencies, and the general public demand evidence that professional development, including the NBPTS process, is *highly effective* in recognizing and shaping *high-quality* teaching (Guskey, 2000). Ballou and Podgursky (2000) question using surveys or any research presented by the NBPTS thus far that only promotes the profession. They claim that the burden of proof for the effectiveness of the NBPTS process is upon the National Board for Professional Teaching Standards, and they claim that so far the effectiveness is in question.

Stone, Cunningham and Crawford (2001) join the voices questioning the effectiveness of the NBPTS process in improving teacher quality. These researchers claim that the format of the NBPTS assessment process is not conducive to accurate assessment of whether teachers are any better than their peers at increasing academic achievement in the classrooms. Stone, Cunningham, and Crawford (2001) state that the process for National Board Certification is not as rigorous as the process for teacher certification, because NBPTS candidates are not observed by university professors or other teachers who are trained in assessment as they teach in the classroom. They claim that responsible teacher education programs require student teachers to provide evidence that the children they have taught have learned what was intended. The

NBPTS, according to Stone, Cunningham, and Crawford (2001) does not provide an objective evaluation of the effectiveness of the program that could be provided through a comparison of student test scores of teachers who are National Board Certified and those who are not National Board Certified. Failure to evaluate teachers as they teach in the classroom and failure to compare student test scores as proof of student learning is the basis for these researchers' claim that the NBPTS certification process is not as strong as a state's teacher certification process.

Here again researchers place value on student test scores as evidence of accomplished teaching. Providing acceptable evidence of accomplished teaching and student achievement is a complex mission that at times not only appears to be unattainable, but the end result of narrowly defining student achievement by standardized test scores threatens to undermine other important aspects of student learning such as student engagement and motivation. Further complicating the issue of high stakes testing accountability is the vulnerability of funding for programs, such as National Board Certification, whose effect on student engagement and motivation might not be easily verified by student test scores. Professional development leaders are looking seriously at the research on professional development in education, including the NBPTS process for certification, to determine the most powerful forms of professional development. Powerful professional development supports teachers with the knowledge and experience they need to continuously grow and develop in ways that have a positive influence on student achievement (Guskey, 1995, 2000; Senge, 2002).

Application of Theory to the NBPTS Process

If the NBPTS is a catalyst for teacher change, what role does context play in the professional development process for successful National Board Candidates, and does a teacher's participation in the network of National Board Certified teachers act as a catalyst for change in practice that is perpetuated after the successful completion of the process? Perpetuation theory (Wells & Crain, 1994) was applied to this study as a mode of inquiry and conceptual framework, and network analysis (Emirbayer & Goodwin, 1994; Granovetter, 1973, 1976, 1995; Lieberman & Grolnick, 1996) was applied as a structural framework. Perpetuation theory was used to examine relationships or ties within a networking context to examine social change. Both theories were used here to provide a useful lens for examining the NBPTS process as teacher growth and enculturation.

Perpetuation Theory

Perpetuation theory (Braddock, 1980) has been used to study the tendency of black Americans to perpetuate racial segregation. Wells and Crain (1994) expanded on Braddock's theory of perpetual segregation by considering it alongside network analysis to add a more structural argument that segregation is perpetuated across generations because "African-Americans and Latinos lack access to informational networks that provide information about, and entrance to, desegregated institutions and employment" (Wells & Crain, 1994, p. 533). Granovetter's (1973, 1983, 1986) work emphasizes the importance of the *weak ties* or informal interpersonal networks, which might consist of acquaintances and friends of friends through whom information, influence, and other opportunities can be dispersed. These *weak ties* are the conductors of the beneficial ideas that would otherwise be outside the individual's experience and

without *weak ties* the information, influence, and opportunity for mobility might not reach him or her (Wells & Crain, 1994).

Individuals who have *strong ties* to segregated settings use the *strong ties* as the predominant frame of reference according to Granovetter (1973), and he further maintains that the strength of a tie is a combination of the "amount of time, the emotional intensity, the intimacy and the reciprocal services which characterize the tie" (p. 1361). *Strong ties* are most likely found within subgroups or cliques and weak ties bridge between the subgroups through occasional interaction among members of other subgroups. McPartland and Braddock (1981) point out that an individual's goals and career decisions are strongly influenced by people with whom a group member has *strong ties*.

Perpetuation theory could be useful in understanding the enculturation of members into particular groups or group settings when using Granovetter's (1973) measure of the strength of a tie—time, emotional intensity, intimacy, and reciprocal services. Members who have comparable backgrounds, beliefs, and practices were likely to form *strong ties* within a particular clique or subgroup, and conversely members who had disparate background, beliefs, and practices developed *weak ties*. According to Wells and Crain (1994) *weak ties* then become the conduit of information through which new ways of thinking and behaving become possible. Granovetter's (1973) measure of the strength of a tie—time, emotional intensity, intimacy, and reciprocal services—can be used to determine whether ties are strong or weak.

This framework is assistive in explaining the anomaly of differing perspectives about the value of the NBPTS process as a catalyst for ongoing change. When *strong ties* were identified in the interviewee's transcription they indicated a tendency to resist

change. Conversely, *weak ties* indicate that individual teachers are open to new ideas and willing to grow and develop their practice in order to improve student learning. Weak ties are local bridges to diffuse information (Granovetter, 1973). This means that whatever is to be diffused can reach a larger number of people and traverse greater social distance when passed through weak ties rather than strong ties (Granovetter, 1973). In other words weak ties encompass a larger group of people beyond the strong ties, and weak ties between people or groups of people form a larger network for the diffusion of ideas and innovations.

So how are strong or weak ties measured? Ties are considered strong when the people involved spend a greater amount of time together, interact most regularly or intensely with each other, confide in each other, and depend on each other for assistance, perhaps to the exclusion of other people. In search of a definition of a *strong tie*, the measures of ties are further discussed in the following:

1. *Amount of time.* The tie between two or more people is stronger when it involves a larger time commitment. In other words according to Granovetter (1973) if people spend time together they are more likely to exclude others through whom information may come.

2. *Emotional intensity.* The tie between two or more people is stronger when they see each other regularly to the exclusion of others.

3. *Intimacy (mutual confiding).* The tie between two or more people is stronger when they confide personal information to each other.

4. *Reciprocal service.* The tie between two or more people is stronger when they depend almost exclusively upon each other for assistance.

Network Analysis

In varying degrees of theoretical sophistication network analysis uses a broad strategy for investigating societal structure in order to understand the relationships among culture, agency and social structure (Emirbayer & Goodwin, 1994). Network analysis originates from particular basic theoretical presuppositions and premises that are widely accepted by its practitioners. According to Emirbayer and Goodwin:

It holds to a set of implicit assumptions about fundamental issues in sociological analysis such as the relationship between the individual and society, the relationship between "micro" and macro," and the structuring of social action by objective, "supra-individual" patterns of social relationships. (1994, p. 1414)

In their assessment and critique of network analysis Emirbayer and Goodwin (1994) emphasize its departure in important ways from the sociological approach to empirical quantitative research with a number of qualitative community studies. Different models in the network literature can be applied to processes such as diffusion of innovations and educational attainment— "as well as the more typical processes of crowd behavior and social movements" (Granovetter, 1978, p. 1421). Social facts are regarded by most social theorists as "ecologically embedded within specific contexts of time and space—that is to say, within particular interactional fields composed of concrete, historically specific natural areas and natural histories" (Emirbayer & Goodwin, 1994, p. 1415).

In analyzing the meaning of the *micro-structure* or a social structure involving cliques, consideration must be given to the hierarchy and the influence of the culture upon individual action and ideas. "Where a teachers' clique is dominated by a

particular teaching philosophy, for example, one might expect classroom practices

consistent with this philosophy to receive strong social support" (Granovetter, 1995, p.

82). Social relations are important in network analysis where teachers in schools can

receive social support for their practices and feel pressure to maintain them

(Granovetter, 1995). Bridging the "micro-macro" gap investigations by network

analysts are carried out with both individuals and groups, because of the dualism or

interrelatedness of groups and actors (Emirbayer & Goodwin, 1994). The implicit

model of *structuralist constructionism* (Emirbayer & Goodwin, 1994) is the most

successful in "conceptualizing human agency and the potentially transformative impact

of cultural idioms and normative commitments on social action" (Emirbayer &

Goodwin, 1994, p. 1426).

To represent historical change, a social network is interpreted as a network of

meanings where stories and narratives describe the ties or connections in networks—or

in other words a social network is a network of meanings that can be determined by

analyzing narrative (Emirbayer & Goodwin, 1994). If cultural and societal networks

shape individuals, then individuals are also actors in shaping groups, and individual

stories and narratives can be deeply explored for explicit analytical themes to "discover

the ways in which actors' identities are culturally and normatively, as well as

societally, determined" (Emirbayer & Goodwin, 1994, p. 1446).

In this study, network analysis illuminates the understanding of the extent to

which NBCTs' philosophies are supported by the *micro-structure* or *clique* of the

group of teachers with whom the interviewee spends the most time, and it determines

the extent to which the interviewees perceive that their group influences them to

continue to match their practice to the standards of the NBPTS. Network analysis is a

useful tool in exploring the concept of the *threshold* where the interviewee made the decision to continue or not to continue matching their practice to the rigorous NBPTS Standards.

Summary

This chapter provides important information on the National Board for Professional Teaching Standards process as powerful professional development that can change teacher practice and improve student engagement, achievement, and motivation. Guskey (1995; 2000) and Sparks (2002) highlight the importance of context as an explanation for the seemingly incompatible dichotomies presented by the historical research on professional development. There is no one right answer for powerful professional development (Sparks, 2002) that works in every setting, but rather an assortment of interconnected processes and technologies that must be adapted to unique settings. The purpose of powerful professional development is to use dialogue (Gamston and Wellman, 1998), reflection (Schon, 1987; Swain, 1998; Rodgers, 2002; Stronge, 2002, inquiry (Richardson, 2003), and collaborative (Gitlin, 1999; Hargreaves, 2000) processes to improve student learning. Implementing the powerful professional processes in teacher practice is challenged by ethical, structural, and cultural dilemmas within traditional school contexts. In addition to school culture, successful implementation of the powerful professional development processes is also dependent upon teachers who are mature enough to trust each other, skilled in group processes, and committed to improving student learning (Garmston, 2003).

Standards within the National Board for Professional Teaching Standards process validate the four processes of *dialogue, reflection, inquiry, and collaboration* as part of the NBPTS process. Standard VIII: Professional Partnerships and Standard

IX: Reflective Practice, assess teacher judgements about student learning evidenced by a portfolio of video taped lessons, student work samples, and reflective written responses that contain information about next steps based on the candidate's findings. Surveys and the *NBPTS Certification system: A construct and consequential validity study* promote the NBPTS process as powerful professional development that makes a difference in student learning. Critics of the NBPTS process claim that the studies cited do not compare student achievement test scores of National Certified teachers and non-Certified teachers so they are not proof of the value of the NBPTS process.

Perpetuation theory (Wells & Crain, 1994) was applied to the study as a conceptual framework and mode of inquiry for this study, and network analysis (Emirbayer & Goodwin, 1994; Granovetter, 1973, 1976, 1986) served as a structural framework. Perpetuation theory was used to examine relationships and the strength of ties within a networking context. When investigating social or cultural change, network analysis offers insights that allow the examination of ties between members and groups. Together the theoies were used in this natuarlistic inquiry approach to provide a useful lens for examining the professional growth and enculturation of National Board Certified Teachers.

CHAPTER III

METHODS

This qualitative study seeks to identify the processes needed for educators to

better understand teachers' powerful professional development within the National Board

Certification process. Powerful professional development is defined as processes and

activities that enhance professional knowledge, skills and attitudes of teachers so that

students perform at levels of excellence (Guskey, 2000; Hilliard, 1997). Powerful

professional development processes of dialogue, reflection, inquiry, and collaboration

interconnect in useful ways when teachers focus on ways to improve student learning.

The National Board Certification process challenges classroom teachers to match their

practice to standards of the National Board for Professional Teaching Standards which

can sometimes represent a very different approach to teaching for those voluntarily

involved in the process.

This study examines the usefulness of perpetuation theory (Wells & Crain, 1994)

and network analysis (Granovetter, 1973, 1976, 1986) for explaining teachers'

perspectives. How do National Board Certified teachers perceive the effect of the

National Board Certification process on their practice? What processes do teachers

discuss when they talk about their teaching practice?

National Board Certified Teachers were interviewed and asked to identify ways

the process acted as a catalyst for change that improved their teaching and the learning of

their students. What networks gave support to teachers involved in the process, and what

networks encourage their continued professional growth? Information was obtained

through semi-structured interviews, collection of documents, and discussion about National Board Certification with NBPTS teachers that I work with in the course of my job.

Study Design

There are several reasons why a qualitative design was selected as most suitable for this study. A qualitative design focuses on participants' perceptions of reality through interaction with their social world (Creswell, 1994). To investigate the characteristics of powerful professional development in a population of National Board Certified Teachers' experience, I researched the perceptions of different teachers about their practice. Qualitative inquiry studies use inductive reasoning to investigate, describe, and derive meaning from social phenomena (Merriam, 2001).

In the current study the data that materialized was descriptive, and I attempted to comprehend how the participants made sense of their experience. (The focus was what teachers thought educators, legislators, and the general public should know and understand about National Board Certification.) The researcher was the primary instrument for data collection and analysis in this qualitative research (Merriam, 2001; Wolcott, 2001). As researcher, I conducted the interviews, met with teachers for member checking, and collected documents for analysis.

Explanatory case study method was the research strategy for this study (Mertens, 1998). In this case study strategy, the researcher investigates a specific group which can be bounded in time and activity (Mertens, 1998). The boundaries for what pertains and what does not pertain to the study are clear. According to Merriam (2001) case study is a holistic approach that does not require a particular method of data collection or data

analysis. Creswell (1994) and Mertens (1998) describe case study as description and analysis that results from interviews, document analysis, and fieldwork. In this study I conducted interviews, analyzed documents, and through the regular course of my job as Professional Development Center Director met with National Board Certified teachers both formally and informally to discuss the NBPTS process and the influence it had on each individual's practice.

Researcher

I was born at the end of the first half of the 20th century, three years after my father miraculously returned from World War II. He was captured by the Germans in France, missing in action, and his family, having received a letter edged in black, feared the worst. My father believed that his return from war was the answer to prayers. He applied himself to serving well the God who had saved him. Both my father and mother instilled in me a strong faith. I am blessed with a good family, good friends, and enough love and faith to bring me through adversity. This is how I see myself. This influences how I see the world.

The issue here, however, is how my life experience relates to my research, since in qualitative research the researcher is the primary instrument for collecting data and analyzing the results (Merriam, 2001). The researcher decides which questions to ask in which order (Mertens, 1998), which follow-up questions and thoughts to pursue, and how to represent the information for the reader (Merriam, 2001). Therefore, the researcher's assumptions, beliefs, values and biases are an important focus for the researcher and the audience (Mertens, 1998). In the following I have outlined what I see in my experience

that has influenced my views of teachers, in particular those teachers who have completed the process for National Board Certification.

First, I have never gone through the process for National Board Certification. However, I have worked with groups of candidates who are seeking National Board Certification for more than four years. It is my belief that assisting teachers who are going through the NBPTS process does not equate with actual participation in the experience. My assumptions about National Board Certified teachers have been shaped by my experience in giving support to NBPTS candidates seeking certification and in giving professional development support to National Board Certified Teachers after they have completed the process.

In my position as a professional development director I gather resources, work with the local university to share information about resources, plan training, and make arrangements for substitutes for teachers working on certification. From my experience, I believe that teachers who voluntarily participate in the National Board Certification process can use the opportunity as a catalyst to improve their practice in ways that improve student learning. I also believe that teachers can go through the process, receive National Board Certification and teach in ways that do not increase student engagement, achievement, or motivation. I assume that some teachers practice to the standards of the National Board for Professional Teaching Standards before participating in the process. Teachers who have never participated in the NBPTS process may also be outstanding teachers. However, I am interested in what can be learned about powerful professional development for teachers who participate in the NBPTS process; because my past experience leads me to believe that the rigorous and relevant process can act as a catalyst

for the kind of deep change in practice that improves student learning. I am also interested in the context and network that may support and continue to encourage teachers in their professional development.

Second, I have been involved in education formally and informally for the past 32 years in several different settings and levels. Previously in my career I taught all subjects in public school grades K-5 for more than 18 years. I worked part time with private preschool for four years, and I have served as an administrator working with curriculum and professional development planning and implementation for more than 10 years. At this time I am a leader in professional development for teachers in my area of the state.

However, while my experience can help me to better empathize with the participants in this study, my experience can also present a danger to me if I do not distance myself enough from the National Board Certified teachers to represent them well to the reader. I must be careful not to assume that because I have been a teacher and worked with teachers for so many years that I can readily understand the exclusive perspectives of the National Board Certified teachers. The need for caution shapes the way I listen to the teachers' remarks about their unique experiences. Caution also must guide my translation of those experiences for readers.

According to Patton (2002) at the same time I, as researcher/participant, am gaining understanding as an insider, I, as interpreter/translator, must remain aware that I am an outsider. Perplexing as this is, I know that these two perspectives can be used to assist me. Both the *emic* or insider perspective and the *etic* or outsider perspective are useful to researchers. For instance, as an insider, I can get close to the participant's

experience, and as an outsider, I can distance myself enough to describe the experience more generally to and for outsiders (Patton, 2002).

Patton (2002) discusses how Kenneth Pike in 1954 coined the terms *emic* and *etic* to distinguish a classification system for reporting by anthropologists that was based on (1) the language and categories used by the people in the culture being studied, an *emic approach*, (this is useful for understanding a particular culture) which was contrasted with (2) categories created by anthropologists based on their analysis of cultural distinctions, an *etic* approach (this is useful when engaging in cross-cultural analysis). Patton (2002) makes clear that leading anthropologists such as Franz Boas and Edward Sapir argued that only people within a culture, from the *emic* perspective could meaningfully make distinctions about a culture. Patton (2002) continues the discussion by pointing out that other anthropologists believed that the researcher had to stand far enough away from the culture being studied to look at separate events in the culture in order to compare the significant categories across cultures, the *etic* perspective. According to Patton (2002), a debate raged for years about the merits of the emic versus the etic perspective, and the tension between the two extremes remains. However, both perspectives are valuable for researchers and the audience, because each perspective contributes something different (Patton, 2002).

So if Patton (2002) is making the point that the *emic* and *etic* perspectives should both be used by the researcher rather than choosing one at the exclusion of the other, how have I incorporated that into my research? The challenge is to know when in the research and writing process to assume the *emic* or *etic* perspective.

When I used the *emic* perspective, I was not just immersing myself in the culture; I was going inside myself to check how my experience from within the culture matches the experience of the participants. The good in this is that I describe the experience as an insider; the danger is that I might assume an understanding without listening closely to the participants in the interview. I tried to overcome this danger by checking back to clarify points and issues with the participants, rather than making too many assumptions based on my own experience.

When I used the *etic* perspective, I was checking this culture out by using categories to compare the similarities and differences with other cultures. For help in doing this I used a theoretical framework of perpetuation theory and network analysis as well as the concept of powerful professional development. The good in this is that I am holding the data against the experience of accepted researchers; the danger is that I assume that while I am interpreting the similarities and differences for an audience I understand the theory as the researchers intended.

Patton (2002) describes the emic/etic perspective as a back and forth, in and out view. First the view is through a wide-angle lens that focuses outward on social and cultural aspects of the participants' personal experience; then the look is inward, exposing a vulnerable self, which may distort or resist cultural interpretations. My only response to the danger of misinterpretation has been the awareness of my vulnerability as a researcher/interpreter, and an attempt to be honest about who I am and who I see the participants to be. It is difficult to keep the in and out and back and forth perspectives separate in this research. They have a tendency to blur, but my intent is to give the reader

enough documentation and information to help him interpret beyond my translation of the information.

My beliefs about teaching and education in general have been influenced by contacts and interactions with professors, colleagues, and friends in my personal and professional experiences. These networks of professors, fellow students, and colleagues in conjunction with professional readings have caused me to question beliefs and assumptions about teaching and education that I previously held. In addition to the outside influences, training and interactions, another facet of my professional development has come through self-reflection and through different interpretive surveys which have opened my eyes to perspectives I held about teaching that sometimes surprised me.

Data Collection Procedures

The data on which the paper is based are drawn from a study of the perceptions of professional development which comprised interviews with four NBPTS certified teachers. The sample was gender mixed and distributed across levels from pre-school through high school representing different levels and subjects. Documents were collected throughout the study. Information gathered from participants through semi-structured, face-to-face interviews was collected between January 6 and March 31, 2003.

Sample Selection and Boundaries of the Study

A purposeful sample of National Board Certified teachers was engaged in this study. When statistical generalization to the larger population is not the goal of a study, most qualitative research chooses this form of non-probability sampling (Merriam, 2001). The assumption with purposeful sampling is that the researcher wants to choose the *best*

sample, as opposed to an *average* sample. The best sample will *best* answer the research questions (Creswell, 1994) or *best* inform the problem of the study. Qualitative research requires participants who have special experiences and knowledge. The criteria established for purposeful sampling guides the researcher in selecting "information-rich cases" (Merriam, 2001, p. 61).

The participants interviewed in this study were 4 National Board Certified teachers. The criteria for their selection were: 1) The National Board Certified teachers must currently be teaching in public school, 2) The National Board Certified teachers must have received National Board Certification within the past four years, 3) The NBC teachers must represent grade levels from pre-school to high school, and 4) The NBC teachers must exhibit the quality of teacher leadership in facilitating the professional development of other inservice or preservice teachers. The sample was selected to include NBC teachers who were involved in teacher leadership either within their schools, state or nation, or the NBPTS network. The contacts were made in a method where the first participant suggested others who fit the criteria and might agree to participate.

The rationale for the criteria selection of the participants was influenced by the concepts of powerful professional development presented by Sparks (2002) in which teacher learning for deep change in practice is ongoing and shared. By choosing teacher leaders who were involved in developing themselves as well as other teachers it was hoped that the influences for the teachers' continuing development could become part of the dialogue and discussion.

Setting

The study was conducted in a state with a number of National Board Certified teachers. Participants in the study had teaching experience in more than one school district, but the identity of the districts and the participants will be anonymous. The interviews were conducted in several different locations at times convenient for the participants. Additional follow-ups were conducted in person, by email and by telephone when new questions emerged from the data.

Actors

The actors who participated in the interviews were National Board Certified teachers who are presently teaching in public schools. The participants represented different levels from pre-school through 12th grade and were gender mixed. Their years of teaching experience in public schools were from 17-24 years. Some of the interviewees had been teacher leaders before National Board Certification and some had not. Each of the interviewees demonstrated teacher leadership after National Board Certification.

Events

The participants were interviewed individually in face-to-face sessions. The expert informers were asked to identify the unique characteristics of the National Board Certification process. Actors were asked to name important aspects of the process, especially as it represents powerful professional development that affects teaching practice and student learning. What about the process was a catalyst for change in their teaching practice? What evidence can they give for better student learning as a result of their learning in the NBPTS process? Actors were also asked to define the networking

context of support they received while going through the process. Who supported them during the process and who supports them now?

Types of Data

Data were obtained through semi-structured interviews with individual teachers who have successfully completed the process for National Board Certification and by collection of documents.

Interviews. Interviews were conducted face to face in a semi-structured format, with an interview guide of 10 focus questions to establish the parameters (Appendix A). The questions and interview protocol were presented to participants before the interviews either by email through regular mail. Interviews were conducted in schools or wherever it was convenient to meet. Initial interviews and follow-ups were audio taped and transcribed. Initial interviews lasted for 1 ½ to 2 hours with follow-up interviews conducted in various lengths of time depending upon the questions that needed to be answered. Most interviews were conducted in schools and classrooms.

Documents. Documents were collected which addressed issues pertaining to National Board Certification in order to better understand the special culture and terms used within the network of National Board Certified teachers and to triangulate the data. Documents such as email messages and discussions of other National Board Certified teachers across the nation were helpful in reading about the experience for other teachers in different areas. The website for the National Board for Professional Teaching Standards was also helpful in providing the *Professional Standard*, which is the official newsletter for the National Board for Professional Teaching Standards.

Access to information about other research with National Board Certified

teachers, and the description of the portfolio process was also contained on the website.

When using documents mined from online sources it is important for researchers to

carefully consider biases that might be filtering the intended information (Merriam,

2001). The NBPTS on their website promotes the National Board Process as a catalyst

that changes the practice of National Board Certified Teachers in a way that improves

student learning.

<div style="text-align:center">Data Analysis Procedures</div>

Creswell (1994) describes the analysis of qualitative data as an eclectic process,

and although there are many right ways for proceeding with data analysis, it is important

to choose a plan rather than leaving the process to chance (Mertens, 1998). Creswell

(1994) suggests "in the plan that the data analysis will be conducted as an activity

simultaneously with data collection, data interpretation, and narrative reporting writing"

(p. 153). Coffey and Atkinson (1994) agree that in an ideal world simultaneously

interpreting and writing up collected data is preferred, but they also know that novice

researchers in their uncertainty may put off the data analysis processes of "data reduction,

data display, and conclusion drawing and verification" (p. 7). Coffey and Atkinson

(1994) echo Creswell's (1994) remark that a search for one right way to analyze the data

is fruitless.

Lack of an exact recipe for data analysis can cause real headaches for novice

researchers who put off working with the data, because they are unsure of where to begin.

This researcher was guilty of putting off working with some of the data when interviews

were close together, but for the most part the data was transcribed, analyzed and coded

soon after the interview. Transcribing interviews myself rather than having someone else to transcribe them gave me a deeper understanding of the participants' perceptions. Also, the analysis, follow-ups, and other information gathering opportunities were better informed because I had listened several times to the interviews. I then asked trusted and knowledgeable National Board Certified teachers, as well as my advisor, to assist in the review, to verify my findings, and check for things that I might have missed.

During the process of qualitative analysis the voluminous amount of data must be reduced and interpreted or organized and inspected so the researcher can use the data to think with (Coffey & Atkinson, 1994). The purpose of the analysis is to search the data for relationships and interpretations. Wolcott (2001) emphasizes a search for themes and patterns through systematic procedures that identify essential features and relationships. In this study the data was reviewed as collected and coded, and then it was reviewed and recoded in light of other data and information. Perpetuation theory and network analysis provided lenses for analyzing the data. The powerful professional development processes of dialogue, inquiry, reflection, and collaboration were also used in the analytical coding process to make sense of the data while searching for evidence of powerful professional development.

The category construction in this study was guided by perpetuation theory, network analysis, and processes of powerful professional development connected to the purpose of the study. Relationships or *strong and weak ties* were analyzed through the hermeneutic dialectic circular process of further interviews and literature research informed by the teacher interviews (Guba & Lincoln, 1989). Coding and categorization of teacher statements about their *ties* to other teachers was used to determine the *strength*

of the tie by using Granovetter's (1973) four factors of "amount of time, the emotional intensity, the intimacy and the reciprocal services which characterize the tie" (p. 1361).

Commonalities and dissimilarities between individuals were analyzed to determine the strong ties which would most likely be found within subgroups through occasional interaction among members of other subgroups. Braddock and McPartland (1981) point out that an individual's goals and career decisions are strongly influenced by people with whom a group member has strong ties. Research shows that powerful professional development demonstrates the intertwined perpetual processes of dialogue, inquiry, reflection and collaboration.

The interviews were coded on at least two levels in a circular fashion. First the interviews were coded with a thin flat set of categories which did not do justice to this academic, because they were sorted by the small bits of information that could be either meaningful or insignificant (Coffey & Atkinson, 1996). Next the interviews were scrutinized to identify the themes that reflect the informants' views more closely. Those themes were then connected in the interviews and across the interviews and with other data segments. The point of this reading and re-reading, coding pieces of the data and connecting themes within the data is not to search for the one *right* group of codes but to recognize the links between particular segments of data and categories in order to conceptualize the segments (Coffey & Atkinson, 1996).

How do National Board Certified teachers perceive the effect of the National Board Certification process on their practice? The powerful professional development processes of dialogue, inquiry, reflection, and collaboration were used in the analytical coding process to make sense of the data. What processes do teachers discuss when they

talk about their teaching practice? National Board Certified Teachers were interviewed and asked to identify ways the process acted as a catalyst for change that improved their teaching and the learning of their students. What networks gave support to teachers involved in the process, and what networks encourage their continued professional growth? The strength of a tie within the network was measured by amount of time, intimacy, intensity, and reciprocity.

<div align="center">Research Criteria</div>

If the purpose of research is to generate or test theory and possibly to add knowledge for the sake of knowledge (Patton, 2002), then it is important for the reader to know the research can be trusted. Since the research may inform action, then the person who reads it needs to be assured of the excellence or quality of the research (Creswell, 1994). To ensure quality for the consumer, procedures to verify the collection of the data and its interpretations and conclusions need to be made explicit (Merriam, 1998). Does the data form the base and support for the conclusions of the study? Is the data analyzed logically within a correctly constructed design? The more grounded the researcher's findings are in supporting detail, the more credible and trustworthy they are (Merriam, 1998).

The qualitative researcher establishes credibility in the study by confirming the validity and reliability of research conducted in an ethical manner. Merriam explains that internal validity or trustworthiness (the degree to which the information is accurate and matches reality), external validity (the limits of generalizability or transferability), and reliability (the extent to which research findings can be replicated or are supportive of the purpose of the study) are important in qualitative research.

Internal Validity

Determining the accuracy of the data and its match with reality in qualitative research can be problematic when researchers find it difficult to agree on a definition for reality. Rather than debating the definition of reality, let us assume with Merriam (2001) that reality is fluid, multidimensional, and ever changing. Thus, qualitative research is more analogous to a video than a snapshot, but even videos are dependent upon the person framing the moving picture to give the viewpoint that most accurately represents the person being videoed. The reality that a researcher is responsible for representing is the participant's view of reality, and the closest representation of the participant's reality is a translation by the researcher. Do my findings capture what is really there? Does the presentation of the study accurately communicate the perceptions and experiences of the participants in the study?

Internal validity in the study is dependent upon the translation and communication of the researcher, but according to Merriam (2001), at least there is no survey or other research instrument to come between the participant and the researcher. When reality is viewed in this way, qualitative research is closer to reality. Many researchers, including Creswell (1994) and Merriam (2001), agree that an investigator can use six basic strategies to enhance internal validity. In this study I used the following strategies: triangulation of data, member checks, peer-examination, and an examination of researcher bias.

Triangulation. In triangulation the researcher looks for emerging themes among multiple sources of data and multiple methods of collecting data (Creswell, 1994). The substantive purpose of triangulation is beyond an adherence to the technical assurance of

validity. A holistic understanding of the participants and the situation is important in interpreting the data (Merriam, 2001). In this study multiple sources of information, interview data collected from National Board Certified teachers, documents relating to professional development and the National Board for Professional Teaching Standards processes were collected and analyzed.

Member Check. The member check is a way of confirming with participants the accuracy of the findings and conclusions in the study (Creswell, 1994). Is the interpretation of the information by the researcher a correct representation of the perceived reality of the participant? Checking with National Board Certified teachers was important to this study to guard against my assumption that my background as a teacher and an administrator who worked with National Board Certified teachers and teacher candidates would give me special insight that would give me automatic understanding of the perceptions of National Board Certified teachers. I found the immediacy of email, informal meetings, and phone calls helpful in making clear any questions or confusion about the interviews or further information and clarification about issues that were raised.

Peer examination. Peer examination gives opportunity for the researcher to have informed colleagues read over the findings to check the analysis and conclusion. In this study three professors and two doctoral candidates read over the material and offered feedback and the kind of critical questioning that helps to clarify the information for the reader. These peers were familiar with the purpose and goals of my research and the NBPTS certification program. During the review of the transcripts codes and themes were checked, as well as follow-up questions and additional notes from informal discussions.

Researcher bias. It is important to make biases clear, since the researcher is the primary source of data collection, interpretation and representation. In the section of this chapter titled *The Researcher* I have fully disclosed those biases.

External Validity

External validity refers to the generalizability of findings from this study (Creswell, 1994). Although the purpose of qualitative research is not to generalize the findings, but to shape a distinctive explanation of the events, the limits of generalizability of the findings should be discussed. Stake's (2002) concept of *naturalistic generalizability* is important in case study research because it is embedded in the experience of the reader. Case study researchers assist the reader by providing opportunity for vicarious experience (Stake, 2002). The accounts need to be personal, descriptive accounts that contain some familiar elements so that readers can make their own judgments about what might be applicable to other situations. An audit trail of data collection and analysis was kept to provide an accurate and detailed record of the methods and the decisions made during this study. Each phase of the study has been scrutinized by my university advisor, an experienced qualitative researcher.

Reliability/Dependability

Reliability traditionally refers to the extent to which a research study can be replicated (Merriam, 2001). In keeping with a positivist view of static reality, subsequent studies that replicate the original procedures should yield similar results if a study has high reliability. However, in paradigms that influence most qualitative approaches, reality is ever changing, and reliability in qualitative research is re-interpreted. Lincoln and Guba (1998) suggest thinking about the *consistency* and *dependability* in a study.

Merriam (2001) states the question, "Are the results consistent with the data collected?" (p. 206). To make this judgment the reader requires detailed information about the structure of the study, procedures, and methods. Merriam (2001) suggests that reliability or dependability can be enhanced by stating the investigator's position (disclosing researcher bias), triangulation, and a clear audit trail.

Researcher bias, sample selection, data collection, and data analysis were presented in this chapter to augment the reliability of this study. Triangulation in addition to an audit trail of documents, protocols, and notes was maintained.

Ethical Considerations

Researchers have an obligation to guard the rights of participants in an investigation (Merriam, 2001). Decisions in every phase of qualitative research from data collection to dissemination of information must be guided by ethical considerations. In this study the following protections were applied:

1. In advance of interview appointments participants were given a written overview of the research to be conducted, including how the information would be used. The information given to the studies participants is in Appendix B.

2. Each participant who participated in the interviews gave written consent (Appendix C).

3. All reports and verbatim interviews are available for the review of the participants.

4. All audiotapes, verbatim transcripts, and notes are secured in a locked cabinet for a minimum of two years.

5.   Only my advisor will have access to the names of those who are

interviewed for this study.

Summary

This qualitative study seeks to identify the processes needed for educators to

better understand teachers' powerful professional development within the National Board

Certification process through the lenses of perpetuation theory (Wells & Crain, 1994) and

network analysis (Granovetter, 1973, 1976, 1995). How do National Board Certified

teachers perceive the effect of the National Board Certification process on their practice?

The powerful professional development processes of dialogue, inquiry, reflection, and

collaboration were used in the analytical coding process to make sense of the data. What

processes do teachers discuss when they talk about their teaching practice? National

Board Certified Teachers were interviewed and asked to identify ways the process acted

as a catalyst for change that improved their teaching and the learning of their students.

What networks gave support to teachers involved in the process, and what networks

encourage their continued professional growth? The strength of a tie within the network

was measured by amount of time, intimacy, intensity, and reciprocity. Information was

obtained through semi-structured interviews, collection of documents, and discussion

about National Board Certification with NBPTS teachers.

In this study I used the following strategies to enhance internal validity:

triangulation of data, member checks, peer-examination, and an examination of

researcher bias. External validity was promoted in the plan for the study by an audit trail

of data collection and analysis which was kept to provide an accurate and detailed record

of the methods and the decisions made during this study. Researcher bias, sample

selection, data collection, and data analysis were presented in this chapter to augment the reliability of this study. Triangulation in addition to an audit trail of documents, protocols, and notes was maintained. Ethical standards were maintained in keeping with the guidelines of the Institutional Review Board of Oklahoma State University from sample selection to the dissemination of information.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS:

THE ORDINARINESS OF PEOPLE WHO DO AMAZING THINGS

All the world's a stage,

And all the men and women merely players.

They have their exits and their entrances;

And one man in his time plays many parts...

(William Shakespeare (1564 - 1616), *As You Like It*, Act 1, scene 7)

Analyzing qualitative data is a complex and purposeful challenge. Making sense of information from the audio-tapes, interview transcriptions, follow-up sessions, notes, and written documents can be overwhelming. There are times the researcher could be compared to a person who cannot see the forest for the trees—times when the numerous bits of data and information obscure the larger meaningful concepts that are connected to the data and should emerge during the study. The more the data is reviewed the more reviewing seems to reinforce the complexity and ambiguity of the setting, according to Feldman (1995). The interpretation of the data in order to bring deep meaning to people who have not directly observed the phenomena is still a worthy goal, hopefully attainable. How can the data be presented, for whom will it be presented, and what is the purpose of the representation?

Feldman (1995) recommends *interpretation creation* as an explanation of description and analysis in the presentation of data to an audience. At the same time she characterizes *interpretation creation* as tricky, because the results should be more than an

application of a preexisting theory, or a mere description of a culture. Not that either theory application or data description in and of themselves are without difficulty, but the point here is that neither theory application nor data description can be isolated from interpretation.

In this presentation of the data, the two elements of description and interpretation are inextricably tied, and the complexity of *interpretation creation* is found within the interlinking of description and interpretation (Feldman, 1995). When the data is presented, Feldman (1995) states that the purpose of *interpretation creation* is for the researcher to interpret for an audience how parts of the culture influence one another and relate that to the study. Feldman (1995) also states that *creation interpretation* should shed light on how similar processes may be occurring in other settings. So what strategy can be used for *creation interpretation* in this study of National Board Certified teachers and how do we begin?

The four possible strategies for analysis of qualitative data described by Feldman (1995) are ethnomethodology, semiotics, *dramaturgy*, and deconstruction. Of these four techniques the technique chosen for this study is *dramaturgy*, because a *dramaturgical analysis* is carried out by someone studying a performance, and National Board Certified Teachers are expected to perform (Feldman, 1995). *Dramaturgy* would appear to be a good technique for analyzing teachers' experience and practice during and after participation in the NBPTS process for certification. During the NBPTS process a teacher's performance is judged by an audience of assessors who consider each candidate's portfolio containing a video documenting the candidate's classroom teaching performance, the written analysis of that performance, and the candidate's performance

on written tests that evaluate knowledge. Those who assess the teacher's performance in the classroom are checking to see how well the teacher candidates match their practice to predetermined NBPTS standards for the chosen area of certification. NBPTS assessors are teachers who are trained in NBPTS assessment, and they are looking for evidence in the videos and reflective writing that documents how teachers match their practice to the NBPTS standards. After certification the reflective language participant's use in their discussion about the process and its impact on their teaching should document the value of the NBPTS process as a catalyst for ongoing change in teaching performance.

The purpose of *dramaturgical analysis* is the construction of *meaning* from a performance (Feldman, 1995). The construction of meaning for the actors is documented in this study through narrative and notes from interviews with National Board Certified teachers. The narrator/interpreter directs the audience's attention toward both surface and underlying features in the performance. Surface features are the technical or superficial manifestations of the act that may be obvious. Underlying features are usually symbolic and embedded in the substantive structural meaning of the act spotlighted during a performance (Feldman, 1995). The analysis includes not only the act itself, but the meaning produced or messages that are conveyed by the act (Feldman, 1995). *Dramaturgical analysis* limits the focus to events and the particular features of events with a spotlight on people in their roles and the intentional strategies they use to generate the desired understanding or effects (Feldman, 1995).

In considering this study, the questions posed begin with the following:

- What performance is taking place?
- What meaning is being portrayed to an audience?

- How do the elements that make up the performance contribute to the meaning? (Feldman, 1995).

Burke's (1969) pentad of social action is useful in considering the previously listed questions since the pentad focuses on the elements of performances such as the roles people are playing and the setting in which they are played. Burke's pentad divides social action into five basic elements: *scene, act, agent, agency*, and *performance* including the elements that make up the performance (Feldman, 1995). I have adapted Feldman's (1995) use of Burke's language for *dramaturgical analysis* in the following short glossary of terms. I have chosen to list the terms in alphabetical order.

1. *Act*-The act is what is done during the performance. The act speaks to the question: *what* do the National Board Certified Teachers do? (The application would be when NBCTs use language that verifies their continuing use of inquiry, reflection, dialogue and collaboration to improve teaching performance they authenticate their experience with the NBCT process as a catalyst for deep change in practice.)

2. *Agency*-The agency is the means through which the agents bring about their actions. Agency informs the question: *how* do the NBCTs do what they do? (An understanding of agency is enhanced by increasing knowledge about how NBCTs network with colleagues through local, state, and national organization in order to grow and develop as professionals.)

3. *Agent*-The agent includes the actors and the roles they play. Agent description considers the question: *who* are the NBCTs? (NBCTs in

addition to other roles they play are leaders within their district locally,

and within various organizations on a state, regional, and national level.)

4. *Purpose*-The purpose is the reason or motive for the performance.

Purpose addresses the question: *why* do NBCTs do what they do?

(NBCTs have a will to improve their own practice and connect with

other teachers to improve the profession.)

5. *Scene*-The scene is the setting and context of the NBCT's performance.

Scene concentrates on the question: *where* are they? NBCTs do not allow

the setting in which they teach to restrict their professional growth. (If

the context in which they teach does not help them to grow

professionally, they will either seek a new context in which to work, or

create their own context for growth by networking with others through a

university or a professional organization.)

Dramaturgical analysis serves the purpose of spotlighting particular parts of the NBPTS

teachers' performances or *acts* in order to deepen the audience's understanding of the

professional development processes of the National Board Certified Teachers'

experiences: *what* do the National Board Certified Teachers do? The *agency* of the

NBCTs is the means they use to accomplish National Board Certification and possible

ongoing professional growth resulting from participation in the process: *how* does

NBPTS act as a catalyst for change/no change in professional practice? The *agents* are

the actors and what they reveal about themselves and the roles they play as National

Board Certified teachers: *who* are National Board Certified teachers? The *purpose*

engages the motive behind participant's becoming National Board Certified teachers: *why*

did they decide to go through the NBPTS process and why do they or do they not continue to practice what they learned during the process? The *scene* is not only what is readily visible during the performance, but also the context where National Board Certified teachers act and perform. The scene includes the underlying, sometimes subtle influences on the participant's professional growth and practice. The scene takes in the elements found within the professional context where National Board Certified teachers live and work.

During the analysis the focus goes in and out between micro and macro in the manner of a spotlight on the stage. The micro focus highlights just one person and that individual's act or acts. For example, Dan stands alone on the stage as a high school math teacher in the spotlight to explain who he is, why he decided to participate in the process for National Board Certification, and how it continues to influence his teaching practice. The symbolism behind Dan standing alone in the spotlight is the tradition of professional isolation within the typical American high school, and Dan speaks to the fact that he does not discuss teaching math with his fellow teachers at the high school. He discusses baseball and golf and children and their activities, but he does not dialogue with his colleagues about the success or failure of instructional strategies in his classroom. Dan has a network of professionals he discusses math teaching with on a regular basis; they are just not professionals in his school or district.

The spotlight then enlarges to include the group of four teacher/participants. The similarities and differences across the four teachers bring more meaning to the dramaturgical analysis. For example, all four experienced teachers have sought a network of professionals on a regular basis to help them work on presentations, processes,

projects, and programs that improve student learning. The three elementary teachers established collegial networks in each of their schools, districts and regions, while Dan's professional network was not within his school or district. Dan's network was with teachers on a state, regional and national level. Another difference among participants became evident in the discussion about the participants' decision to participate in National Board Certification. Peggy mentioned that she first began to consider applying for the NBPTS process because her state was offering a stipend to all teachers who were successful. Peggy's decision to remain in the classroom rather than becoming an administrator or university professor was influenced by the fact that she did not go through the NBPTS process just to turn down the yearly stipend offered through her school. (If teachers leave the classroom to become administrators or university professors, they will no longer be able to receive the yearly stipend.) Other differences and similarities will be revealed in more detail during the drama.

At another time the macro focus enlarges to include the entire scene, setting, or context teachers operate within to analyze the symbolism that discloses possible meaning held within the underlying influences that affect professional practice. Each teacher operates within a different teaching context, and the awareness they have of the leaders within their schools and districts can inform an understanding of influences that help to shape teachers' practice. For example, Dorris was the only teacher to mention her principal in response to the question about who influenced you during the time you were working on National Board Certification, and who influences you now? She mentioned that some teachers in her school did not like the principal, but that she was more tolerant of the principal than her peers were. When probed for an explanation of how her principal

helped her, she seemed anxious to remain loyal to her principal without being able to name any specific ways her principal had assisted her during the process for NBPTS.

Sometimes the director/researcher focuses the audience's attention during scenes on stage by changing the color of the spotlight. Actors are seen on stage in blue, green or red light. In a like manner the researcher shows certain scenes of the performance in different lights to emphasize the significance of various interactions, shades of meaning or to draw attention to themes that serve to deepen awareness for the audience. For example, this study brings to light the recurring theme of the inextricable tie between networking and each teacher's professional development, which could be seen in a red light, if red is indeed the symbolic color of power, because teachers are strengthened, energized and empowered by their networks. Or teachers could be shown in a green light if green symbolizes growth and development within the NBPTS process. When Peggy advises NBPTS candidates to remain calm despite the heightened stress of the process, the spotlight Peggy stands in on stage could be blue, which symbolically might be calming.

In dramaturgy, meaning is created by connecting the actor's behaviors observed in the micro close-ups in patterns of behavior that deepen the perception of the macro or panoramic scene of who the National Board Certified Teachers are, what they do and how they do it. The purpose of this analysis is to inform the study of National Board Certified Teachers and their professional growth and development. The micro/macro close-ups of patterns of behavior will be highlighted during the drama.

A Professional Development Drama Presentation

The NBPTS process and the teaching practice of National Board Certified Teachers is an event appropriate for a *dramaturgical analysis*. While the National Board Certified Teachers are the witnesses to the process, their discussion of the event provides an arena for a performance that has meaning for central office administrators, building principals, teachers, and state and national leaders who are involved or should be involved in nurturing professional growth and development for teachers. The students of the NBPTS teachers also have a vested interest in the teacher's performance. Central office administrators and principals give approval (or disapproval) and support (or non-support) for teachers to participate and continue in the NBPTS process and the resulting change in practice. Other teachers, both NBCTs and non NBCTs, are aware of the performance and provide many of the props (in the form of information and encouragement/discouragement).

Teachers and administrators also await the outcome of the National Board Certified teacher's performance. State and national leaders, including leaders involved with the NBPTS process, are responsible or should be responsible for planning, implementing, and nurturing processes for professional development for the National Board Certified teachers. Leaders judge the usefulness of the NBPTS process in promoting teacher growth and development. Students are aware of the performance and provide props (in the form of information through formal and informal assessments). The purpose of the NBPTS teachers' performance is to improve practice and consequently student engagement, achievement, and motivation.

The name of this performance could be *The Ordinariness of People Who Make Amazing Things Happen.* The actors are four National Board Certified teachers who are profiled in the list of actors in much the same way characters in a play would be highlighted to enhance the audience's understanding of the roles they play in the unfolding drama. [All the names of people and places have been changed to protect the identities of the participants.] The prologue that follows the list of characters is intended to set the stage for the first character/participant's discussion of his teaching role and experience as a National Board Certified high school math teacher. In this scene the audience sees the researcher interviewing the NBPTS participant in his classroom while students are voluntarily participating in a study time. Even though Dan is not teaching a formal lesson during scene one, the audience can glimpse the atmosphere for learning that he has created for his students. The audience should be aware of the respect students have for their teacher that is evidenced in the description of their demeanor in an informal setting without any prompting from their teacher.

<center>Actors</center>

What follows here is a listing of the National Board Certified Teachers who participated in this study. The descriptions give a profile of each teacher to introduce each of them to the audience and to set the stage for their performance.

Peggy

Peggy is a veteran teacher who had been teaching for 24 years in mostly urban districts. She achieved a Doctor of Education degree in reading and taught briefly in a university. Presently she is a reading specialist in public elementary schools who works with students who need special help in developing the reading skills and strategies to read

at grade level. Her certification area was middle childhood/generalist rather than reading, because at the time she was going through the process the reading certification assessment had not been developed. Since she was applying for certification outside her area of expertise, Peggy depended upon collaboration with colleagues during the NBPTS process to apply the inquiry approach while facilitating student learning. The dialogue with her colleagues was critical as she matched her practice to NBPTS standards in the content areas of elementary math, science, and social studies, because she had to learn the content, then the pedagogy and its application. In spite of the amount of time involved, she met with other National Board Certification candidates on a daily basis. When the NBPTS process ended she described intense feelings similar to losing family. However, she continues to collaborate, dialogue and reflect on teaching with colleagues at her school on a special project, and her growth during the NBPTS process increases her confidence, because she has something to contribute when the gifted teacher and a fourth grade teacher partner with her to team teach students in the content areas.

At the time of this study Peggy had been a National Board Certified teacher for just over three years. She serves on a state steering committee that focuses on promoting the NBPTS process for teachers in her state and helps to teach a class of NBPTS candidates at a university. In addition to leadership within the NBPTS network, she is a National Education Association member and a leader in her state and district organizations. Currently, she holds the office of president of her district organization. Peggy talks about feeling responsible for curriculum work within the district, she had been a curriculum coordinator when the district had the money to pay a stipend, and she often works with curriculum committees and teacher training. When new National Board

candidates successfully complete the certification process, she congratulates them with a note.

Jane

Jane has been teaching for about 18 years. Although she has taught a variety of grades in three different school districts in different states, at the present time she has been teaching first grade for about six years. She has a Master of Education degree and is beginning work on a Ph.D.degree in educational leadership. At the time of this study Jane has been a National Board Certified teacher for just over three years in the area of early childhood/generalist. She is active in the state and area as a teacher trainer in several programs including master math teacher for the state. Jane also helps to teach National Board Certification candidates in a course at the university. At the time of this study she also served on the state steering committee to promote National Board Certification for teachers. Frequently other districts and organizations ask Jane to present information to groups of educators who might be interested in participating in the NBPTS process. She is trains teachers in mentoring and coaching techniques in her state and region. As a teacher leader, she is torn between remaining in the classroom and leaving the classroom to either become a fulltime teacher trainer or to teach preservice and inservice teachers in curriculum programs at the university level.

Dorris

Dorris has been teaching in public schools for 14 years and currently teaches four-year-olds in a public pre-school. She has taught in both rural and suburban districts. At the time of this study, Dorris has a Master of Arts degree and has been a National Board Certified teacher for more than three years. During the year that she was working

on National Board Certification she was teaching in a new assignment in a different district, which she believes might have presented an extra challenge in some ways. However, she also found a group of NBPTS candidates to collaborate with as she was going through the process, and that would not have been possible in her former district. The majority of her leadership opportunities have come to Dorris since she successfully completed the NBPTS process and quickly became an assessor. NBPTS has recently prepared Dorris to train the trainers of those who assess the National Board Portfolios. She also works with the group of National Board Candidates who are enrolled in a course for NBPTS candidates through a university. Early childhood/generalist is her area of certification, and she has been a National Board Certified teacher for about three years.

Dan

During Dan's 17 years of experience as a high school math teacher he has taught courses ranging from Algebra I to probability and statistics in both rural and urban settings. For a while he taught in mathematics education at the university level. Although he has hours above a Master of Science degree, he is not currently involved in a doctoral program. Early in his career he became involved in the National Council of Teachers of Mathematics, and he continues as the president of the state affiliate, having previously served in several other offices in the state and national organizations. Adolescence and young adulthood/mathematics is his area of National Board Certification, and he has been certified for about four years. Local NBPTS candidates often call on him to share his expertise when they need assistance during the process. Dan often makes math presentations to teachers from districts other than his own, and he dialogues with other math teachers at state, regional and national meetings. Before NBPTS he held leadership

positions in state, regional, and national levels in the National Council of Teachers of Mathematics.

<div align="center">Setting</div>

The first scene in this study is presented from the viewpoint of the narrator/researcher to set the stage for Dan's solo performance on stage. The purpose of the setting is to give the audience a glimpse of the interview process and a better understanding of the events that will be highlighted later in this performance. As stated previously, Dan is standing alone on stage to symbolize his solo performance as a math teacher in his school.

The Setting for Dan's Interview

It was drizzling rain and the air was cool as I carefully scurried between cars from the crowded parking lot with my book bag that held the tape recorder and the Subway lunch sack. Several teachers were mixed in with the mass of students spilling out of the set of double doors as I hurried up the steps like a fish laboring to swim up stream against the current of students going off campus to lunch, but students were good about moving over to let me and my baggage pass through. In the hallway students crowded together in groups, laughing and talking as they made their way to lunch. They have a fairly long lunch time, and I later learned that a fair number of students use the extra lunch time to study either in classrooms or in the commons area. As my eyes adjusted to the light in the hallway, I saw a young girl on the edge of a group. I asked her for directions to the room that I sought, and she cheerfully walked me all the way up the steps and down the hall through the gathering of students to the very door of the classroom I required. I thanked her for the courtesy, and she smiled, and said something

about no B.D., which I took to mean no big deal. I walked into the room with my bundles and was greeted by the teacher who had consented to meet with me. After he introduced me to his young female student teacher, who was working with a student who needed help with a math problem, we sat down near the front of the classroom. The moderately-sized teacher's desk was off to one side of the room rather than centered at the front, and I wondered if this teacher was more of a *guide on the side* than a *sage on the stage*.

After handing the Subway sandwich bag to the teacher he thanked me. I brought lunch for Dan so I could interview him for a longer block of time. We had the lunch hour plus an extra preparation time, but Dan had insisted that I come to his classroom for the interview, and I later figured out why being in his classroom at lunch time was so important to him. The student teacher was working on a math problem with a student and so we decided to move to the back of the classroom for the interview. Fortunately, the tape recorder had batteries and I carried extra batteries in my bag so we sat in two student desks where I balanced the tape recorder on the desk's tilted surface. As we were getting situated several students had come into the room, found desks and began to work. Before we could begin the interview another student came into the room to request a letter of reference, and after a bit of discussion about the necessary details, we could at last begin. The atmosphere in the room was relaxed, but studious. Most students worked individually on their homework. A few students asked the student teacher or another student for assistance, so the level of sound in the classroom was a bit above a library level, but it was not distracting. I noticed a few curious students stealing glances toward the back of the room checking out the stranger who was very obviously tape recording their teacher's comments, but they did not intrude on the interview. While I did not

expect so many students to spend their lunch hour in the classroom, the students did not disturb or interfere with the interview. They were comfortable, and they put me at ease as well.

I had both emailed and sent through regular post a copy of the interview protocol and questions (Appendix A) and a copy of the Consent Form (Appendix B). After going over the Consent Form and asking for questions to make sure that Dan understood the purpose of what we were doing, Dan handed me the signed form which I placed in a file folder in my book bag for safe keeping. At last we were ready to begin the interview.

Now that the setting for one teacher in the classroom has been described, the purpose for presenting the following edited interviews/*performance (act)* with the same teacher is to deepen understanding of *who (agent)* an experienced high school National Board Certified teacher really is, *where (scene)* he is and *why (purpose)* he remains in the classroom. It is presented as a prologue to Act I when the four National Board Certified teachers will be on stage to perform monologues and dialogues that further inform *how (agency)* the NBPTS teachers do what they do in their classrooms.

Prologue: Dan's Interview

My name is Dan and I have been teaching for 17 years...which seems not that long. I have taught in 4 different high schools plus a university. I have moved around quite a bit, but now I have settled down in one town and it is a pretty nice place to be. My background is small schools. I was always in small schools, which is one of the reasons that I can teach the stuff that I do. I teach a wide variety of subjects, I don't have any overlapping classes. I teach three different classes now and I'll have three new classes in the fall. This school really

seems easy compared to Yorktown with seven preps [class preparations] a day. One of the things that I like about the block schedule is to have a fewer number of classes, but more time [about 85 minutes with a twenty minute encore session where students come in voluntarily for help with their homework] for each class. It fits the way I like to teach better. With the hands-on stuff that I do having the extra time really helps.

I thought that the process for National Board Certification was really good. It makes a teacher think about *why* they taught what they taught. I think that's probably what attracted me to National Boards in the first place, because I knew that they had written their standards in line with the NCTM [National Council of Teachers of Math] standards. The nice thing about working for the state and national math organizations is that we have worked a lot with the math standards that have been out for a number of years. The other subject area standards are younger than ours. And so I think we probably had the easiest road to go to get standards for NBPTS.

One of the first things that I did with the NBPTS standards was to check to see how they dove-tailed with NCTM. I found out an interesting thing. About a third of the NCTM standards writing team were on the NBPTS writing team. So they really go together. Some of the people that I had worked with at NCTM have written the NBPTS standards. There were a lot of people who were on both committees, and really the NCTM standards as far as curriculum is set aside by NBPTS, because their standards[NBPTS] are just the teaching standards [from NCTM]. NCTM has the teaching standards as well as the curriculum standards. I

was happy to see the connection, because I truly believe that the NCTM standards are the way to go, and if National Boards had done it any other way, I just could not see myself being a part of that. It would have been something that I just really did not believe in.

I feel that is why I found the NBPTS process to be easier than some people might, because I had bought into it, or I believed in it, or however you want to put it. When I studied the NCTM and NBPTS standards, I found that they were truly the way to do what I do in teaching math. When I was going through the process I was writing down what I do, and reflecting on how I teach. While I had always reflected somewhat, it was not in such a write it down way. So that part of the process helped me. I reflect a lot more explicitly now than I ever used to.

The National Board Certification process helped me to realize more what I was doing as a teacher. I've always changed up some of the ways I teach, and I have never really been book bound or anything like that, but since the process, one of the things that I am is better organized. I had to really look at the way things fit together that one year I was going through the process. And I thought that I was looking at it very well before then, but now I know that I wasn't. So now I have it all where it fits together and I think that my classes run a little more smoothly than they did before the process. So you learn a lot of things you don't even expect to learn from it.

Parameters of Powerful Professional Development: The Findings

Narrator: In general, all four participants reported professional growth during the NBPTS process. The domains and themes of powerful professional development in the National Board Certification process informed the organization for the presentation of the findings in this study. The presentation of the data appears in the following groupings:

Act I: The NBPTS Process as a Catalyst for Continuing Professional Development

Act II: Teacher Leadership

Act III: Support Networks as Development

Act IV: The Teaching Profession: To Stay in or Not to Stay In.

Act I: The NBPTS Process as a Catalyst for Continuing Professional Development

Narration: All of the participants stated in the interviews that it was important for National Board Certified teachers to be continuous learners who represent the teaching profession well. Transcriptions of the four participants contained several statements referencing their professional growth and the importance of recognizing teaching as a profession. Themes of professional development processes, including dialogue, reflection, inquiry, and collaboration, were threaded through the discussion of the NBPTS process and its impact upon their teaching.

Scene I begins with a discussion of the decision to participate in the NBPTS process. It is staged with participants seated in a crescent of chairs center stage. The spotlight shines on each one in turn. The narrator is off to the side of the stage. The NBPTS participants' comments provide a representative sample that indicates each individual's reason for seeking National Board Certification.

Each NBPTS candidate had already achieved at least a master's degree, and each seems driven to seek ways to continue development as a professional. Jane wanted to be the best teacher she could be; she wanted her students to learn as much as they could learn, and she felt that the National Board Certification Process could either verify that she was doing her best or show her a better way. Dorris' growth was not being nurtured in the setting and context where she was teaching, and having a master's degree, administrative certification, and reading certification were not enough, and so she sought the challenge of participation in the NBPTS process to enhance her growth as a teacher. Peggy refers to the NBPTS process as a growth process, but she is the only participant to talk about getting an extra stipend as part of the rationale for going through the process for NBPTS certification. According to Peggy, other teachers might not admit that striving to achieve National Board Certification is about the money, but it really is about the money. In the previous monologue Dan, although he did not mention a stipend, reasoned that participating in the NBPTS process was a natural for him, because the NBPTS standards fit his philosophy and beliefs. Scene I also brings to light disadvantages of participating in NBPTS certification process, which participants addressed or did not address; the sub themes of stress caused by the demands of the process, the possibility of failure and the amount of time away from family.

Scene I: The Decision to Participate in the NBPTS Process

Jane: I think the reason I decided to pursue the National Board process was because I already had a Master's Degree, but there comes a time in your career when you say to yourself, am I really doing my best as a teacher, are my students learning as much as they can? Having a Master's Degree just wasn't

enough: I needed more, I desired more, and I thought the National Board

Certification process would provide that for me.

Dorris: I felt that I was being stifled in the small community where I

taught. Most of the teachers around me were comfortable with their teaching and

they were not looking at anything different from the way they had always taught.

I already had my Masters degree, my administrative certification, and my reading

specialist certification, but I decided that there were other challenges out there

that I wanted to pursue to help me grow as a teacher. There was one other teacher

in my school who I admired, and she said, "I'll apply for it if you will." We both

applied, and we were both accepted, but she left to become an administrator. So

with the application in hand and knowing that I had been accepted, I decided that

I was going to leave the small town I taught in and look for another teaching

position. I was at the point that I wanted and needed other opportunities for

myself professionally, and I needed more for my students as well. I think I

needed to grow and renew myself, and participating in the NBPTS process in a

new setting did that for me.

Peggy: You know it takes a certain amount of drive to even try to

become National Board Certified. Also you do it for the money I think, and

everybody tries to say it is not about the money, well, I don't think that most of

us would have done it without the money. I wouldn't have. At the point in my

career, after 23 years as a teacher, I certainly wouldn't have gone through it if I

wasn't going to get paid a stipend. You know, we don't get paid enough and you

hear of a way to make a little bit more and you think, well, what do I have to do?

Prove that I am a good teacher, okay, I think that I can prove it: I'll do it.

Narrator: Each of the participants discussed the challenge of the NBPTS process

during their interview. Dan talked about how his focus on the NCTM standards for

curriculum and pedagogy were his *epiphany* in improving his teaching. When he was

considering going through the process for National Board Certification, he compared

both sets of standards to find that they "dovetailed" with each other. He felt good about

applying for NBPTS certification, because his philosophy of math teaching matched the

NBPTS standards. Jane, Peggy and Dorris considered the NBPTS process a new

challenge. When they coach other National Board Certification candidates in the process,

they encourage the candidates to question what and how they teach. Both Jane and Dorris

mentioned encouraging candidates to go above and beyond a simple reflection,

explanation and analysis of teaching.

Scene II: Disadvantages of Participating in the NBPTS Process

Three of the expressed disadvantages of participating in the NBPTS process were

the sub themes of stress caused by the demands of the process, the possibility of failure

and the amount of time away from family. Dorris, Jane and Peggy talked about the great

amount of stress caused by the demands of meeting with colleagues on a regular basis

and always seeking new knowledge and information in research and professional journals

to share or use when writing entries. The three elementary participants also discussed the

risk of failure involved in the decision to participate in the National Board Certification

process. They each were concerned about what other people would think if they did not

successfully complete the process or if one of their friends did not achieve NBPTS

certification, and they did. Peggy said that she decided that if she did not pass the

certification she would at least be an example of how to handle disappointment and

perseverance in trying again. Dan, on the other hand, assumed that he was well versed in

the NBPTS standards because of his long experience with the standards through NCTM

and was confident that he would be able to achieve NBPTS certification as a natural part

of his normal teaching practice. Dan's teaching efforts were already exemplary in many

ways. For example, Dan goes over and above what many high school teachers would do

when he video tapes many of his lessons so that when he must be gone to national or state

meetings the flow of learning is not interrupted for his students.

Dorris, Peggy, and Jane each mentioned that the *amount of time away from their*

family that had to be dedicated to the NBPTS process was a challenge they knew about

before they decided to apply. Each of them commented that they were going through the

process in one year, when it actually can be a three year process, so they justified the

immense amount of time they had to spend working on NBPTS certification because they

considered it to be compressed from three years to one. The participants spent time

studying professional journals, books and other documents they thought would inform

their teaching, network discussions and writing. Each of them wanted to make sure that

when they met with other teachers they would have something to share from their

readings. Dorris, Peggy and Jane met almost daily with a group of candidates to share

ideas, read each other's entries and improve each entry through critical discussion.

Several fellow candidates within each of their three groups had training in coaching

which was useful in the critical discussion. The candidates, Dorris, Peggy, and Jane, also

mentioned that they had to spend time learning to videotape their lessons, because

videotaping was a new experience for them. Participants also mentioned that it took time getting ideas from each other about the best way to capture the lesson on tape in order to then reflect about it in their writing.

Dan never mentioned the *amount of time* involved as a disadvantage of going through the NBPTS certification process. That could be because he did not network with other teachers on a daily basis while going through the process. He had already spent time learning about the standards from teachers that he worked with through NCTM. Dan did not consider himself to be a confident writer, but he did not mention the writing as being very time consuming either. He was apparently successful in writing by having his wife proof his entries. Time for the process was woven into his Dan's routine and perhaps his feeling that the whole experience was very natural for him helped him to make the most of his time during the process.

Scene III: Benefits of the Experience: Professional development pragmatically tied to the classroom.

Narrator: Each of the four candidates, in referring to their teaching, described professional practice that appeared to be exemplary and accomplished before participating in the NBPTS process. Despite the high level of their teaching expertise before participating in the NBPTS process, and regardless of the high level of their formal education, without exception participants rated the NBPTS process as one of the best professional learning experiences that they had ever participated in.

Each participant commented that the NBPTS process was beneficial because it was pragmatically tied to their own classroom teaching. Peggy describes why she

believes the NBPTS process to be more beneficial to her than even her doctorate in the following:

> *Peggy:* The NBPTS process was more of a learning experience and a growth experience than my doctorate was, because it was more pertinent to what I do. It had more application to what I teach every day instead of being just theoretical and philosophical. So I think it improved my teaching more than anything that I learned at the university in teacher education.

> *Narrator:* In agreement with Peggy, Dorris and Jane rated the NBPTS experience higher than working on a master's degree, and their reasoning was also closely tied to Peggy's rationale. They said it was because the experience of matching their teaching to the NBPTS standards was closely and pragmatically tied to their classroom practice. So what did they learn from the NBPTS process that they believe was so beneficial? Peggy describes the experience as confidence building, and she incorporates what she learned into her own teaching.

> *Peggy:* I think that I could teach science and math now too, and so I incorporate that information into my reading. One of the nice things about being a remedial reading teacher is that you can teach it through any content area. So I feel more secure about bringing more content area work into the teaching of reading, which is really important, because reading for information is different from reading narrative.

Dan commented that he was surprised that he learned so much from the NBPTS process, since he believed that he already had a great epiphany when he studied the National Center for Teachers of Mathematics standards. He said that looking at the pieces

of his curriculum, reflecting on why the pieces were important to students, how the different concepts should be taught and the appropriate sequence for the concept pieces made a difference in the student learning in his classroom.

Scene IV: Teaching as a Learning Profession

Narrator: Each participant referred to teaching as a profession. Jane, Dorris, and Peggy made statements about the importance of the role NBPTS plays in promoting teaching as a profession. Interestingly, as was stated earlier, Peggy was the only participant to mention money as a reason for participating in the National Board Certification process. Ironically, she was also very adamant about a district only hiring teachers who were willing to go through the NBPTS process and continue professional learning in order to benefit student learning. Peggy gives the monologue to support teaching as a learning profession and the NBPTS process as a valuable professional learning experience that should continue in teacher practice.

>*Peggy:* Teaching is a profession, and this makes me think that we should not hire people who are not willing to go through the National Board Certification process. Some teachers might have young children, and so they might not be ready to go through it while their children are young, but we should not be hiring people who are not the kind of people who are willing to go through the process for National Board Certification, because that is what our profession needs to be about. We don't need people just holding down desks and handing out papers. We need to look for people who are lifelong, continuous learners. How can you teach children if you are not learning?

Scene V: Teaching as Professional Development

Narrator: In the following monologue Jane describes four ways she improves

and develops as a teacher. First, the habit she developed of reading professional journals

and books to enhance the continuous learning process for students was something she

began during the compilation of a portfolio while she was working on NBPTS

certification, and she continues that habit by joining professional organizations and

reading their journals. Second, she reveals her purposeful approach to what she will teach

and how she will teach it by using the processes of reflection, inquiry, dialogue and

collaboration as she continuously adjusts her curriculum and pedagogy to student needs.

Third, Jane brings to light how she works collaboratively with a university professor and

with her students to gather, analyze and make decisions about instruction based on

student data collected. Fourth, Jane describes a strategy that she uses with students to

informally assess their learning by taking anecdotal notes so she can adjust instruction for

students who need more help learning a concept.

> *Jane*: 1) During the NBPTS process I continuously researched, because I didn't
>
> want to appear *not* to know something important when I met with other teachers,
>
> or when other teachers in my group read my entries. That whetted my appetite to
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> join professional organizations so I would get their journals and I could read
>
> about the latest research. My desire to read professional books and magazines has
>
> increased....I read books and journals to find the best strategies to use in helping
>
> students to learn, because I want to know how best to find out how to help
>
> students learn. I want to know what students know or don't know.

2) For example, the National Boards process helped me to practice using the inquiry approach while I integrate curriculum in my classroom, and I teach differently from the way I taught before. Now I ask myself, "what is the purpose of this, why am I teaching this...is it benefiting my students?" If it is not benefiting my students I toss it out, and I have tossed out a bunch. Some of the seasonal stuff that I used to use I am not using any more, because you don't have time to waste with stuff that is not a learning priority.

3) I ask students to reflect on their learning in journals, especially in science. In fact I am doing a research project now with a university professor on measurement, and I have students reflect on their learning after we have done a series of activities. This gives me insight into what they have learned and where we need to go next.

4) I also take anecdotal notes while my students are engaged in an activity. I am listening to their conversations, I have them explain to me what they have done, and if they have misconceptions or are still not clear about the concept, I know I have to help them understand. Maybe I just need to try a different strategy or a different approach.

Narrator: Dan reaffirms the significance of Jane's purposeful reflective thinking about what students are learning, how a teacher can know whether or not students are learning, and what teachers will do when students do not learn. Dan extends the discussion further when he talks about spending more time thinking about *why* he teaches what he teaches and in what *sequence* he presents different concepts. As a result of his participation in the process for NBPTS certification Dan now uses reflection and inquiry

as he adjusts the sequential order of mathematical concepts within the overall organization of each semester's curriculum. Dan explains the difference that NBPTS has made in his teaching in the following monologue:

> *Dan:* I think that the standards get you to looking at pieces and how the pieces of what you teach fit together. I thought that I was putting those pieces together well, but when I went through the process I suddenly was looking at the whole year in a different way. Like I asked myself, "why in the world did you put that piece there; it makes more sense over here?" That's where it's *always* been, that's where I have *always* taught it, but if I move it over here I think that it will make more sense. I look at student feedback and evaluation a little differently now.

> *Narrator:* Dan's practice has been enhanced by inquiring about the mathematical concepts that should be taught and the sequence in which the presentation of those concepts makes the most difference in the learning for his students. Now Peggy talks about her epiphany as a result of the NBPTS process and the coaching she received from colleagues. In the following monologue Peggy brings to light that the importance of inquiry is more than the accumulation of content knowledge. Although Peggy had participated in teacher training using the inquiry approach and believed she understood the concept, the significance of the inquiry approach for teachers and students had eluded her. In the following monologue Peggy describes her elucidation:

> *Peggy:* My practice has changed because of the whole inquiry thing. I mean the whole idea of inquiring yourself and learning for yourself, I don't think that I ever grasped that exactly. I thought that I understood inquiry, but then when I

started going through the NBPTS process I realized what it really meant. I did several practice lessons in science and the enrichment teacher and the classroom teacher we were working with would say, you can't tell them the answer, and I would say well it's not the answer to the whole thing, I am just telling them enough to get them started. Then they would say "no, you don't tell them that either." Then I would say, "Do you mean they have to figure out *everything* for themselves?" And then I finally kind of got it, so it's a time consuming kind of thing, but the rewards are really worth it for the kids, because they are learning to think, not just learning to get the answers. So for me that was enlightening.

Act II: Teacher Leadership

Three of the participants were involved in leadership on a district, state or regional level before they participated in the NBPTS process and the fourth participant became involved through the National Board for Professional Teaching Standards after she achieved National Board Certification. All four participants in the three and four years since becoming certified continue to act as teacher leaders in the district, state or region. Jane, Peggy and Dan were actively involved in teacher leadership before participating in the NBPTS process, Dorris was seeking to teach in a district that would enhance her growth and offer teacher leadership opportunities.

Jane trained teachers in her district in programs such as science, math, mentoring and coaching before becoming a National Board Certified teacher. On the state level she was a master teacher in math and science before she achieved National Board Certification. In the three years since achieving National Board Certification, Jane has continued to work as an assessor for NBPTS each summer. During the regular school

year she teaches a preparation course at a university for teachers who are going through the NBPTS process. Her contacts through working with NBPTS at the university brought her an opportunity to work on a state committee to promote and support teacher participation in NBPTS in her state. Through her contact with the state committee the state NBPTS professional development director asked her to read entries and give feedback to teachers from small districts that needed assistance and had no one else in their area to give them assistance.

Peggy, like Jane, has accepted several leadership positions in her school district over the course of her career. She has been an officer in the state and local NEA affiliates. She has also served in leadership positions in curriculum in the district. One of the most recent opportunities for Peggy was a position as curriculum coordinator, and in that visible position she felt that she should be an example to other teachers. She wanted to show teachers she works with that the challenge of NBPTS and continuous learning are an important part of teaching. "I feel responsible for other people taking challenges as well as for myself, and if no one wants to be on a district committee I just have to encourage them to get involved." As she has worked on the state NBPTS committee to promote and support teachers going through the process she values looking at the candidates across the state and seeing their qualifications. She says that it is interesting and encouraging. She did not feel that she could advise candidates who are going through the certification process on ways to improve their entries, because she wasn't sure that what she would tell them would help them to be successful. After Peggy became an assessor her reluctance to read and advise NBPTS candidates changed, "so scoring has given me more confidence in helping people who are going through the process that I

didn't have before." (Both Jane and Dorris affirmed this same reluctance to read entries
for NBPTS candidates, because they were unsure of how to meet the expectation of those
who judge the entries until they became assessors themselves.) National Board
Certification has brought many other leadership opportunities to Peggy through the
NBPTS network, most of the positions are on a state level at this point. She also
continues as president of her local affiliate and in other positions within the National
Education Association.

Dan has been a teacher leader in the National Council of Teachers of
Mathematics and its affiliates for several years. He first began attending NCTM meetings
with his wife early in his career, and when he first began attending he paid his own way.
According to Dan, he began making presentations and then became an officer in the local
affiliate in order to get his registration for NCTM paid. "So I began speaking at regional
meetings which would get my conference paid for and then it would just be a matter of
getting to the conference." Dan began his leadership in the state affiliate as a board
member, and that is when he began making presentations and conducting teacher training
for other teachers in the state and region. When he was working on a master's degree at
the university, two professors got him involved with the state counsel for math teachers,
and once he became a board member he had a lot of invitations to speak and do teacher
training. Eventually he became the treasurer of the state affiliate, an NCTM delegate, and
then president of the state affiliate. Although Dan is the president of the state NCTM
affiliate, another teacher in his school is the head of the math department in his school,
and although he trains teachers in other parts of the state and nation, he does not train
teachers in his school. He says that the teachers in his school are a difficult group with

which to work, because they are unforgiving of a fellow teacher who might believe they had something worthwhile to share with colleagues. The high school teachers' attitude seems to be that they already know all that they need to know, which is in contrast to Dan who is always trying to learn better, more effective ways to plan and deliver instruction.

In contrast to the leadership experiences of Jane, Peggy, and Dan, Dorris did not have opportunities for teacher leadership until she moved to a different district and successfully completed National Board Certification. She became an assessor for NBPTS and then she became a trainer for assessors of NBPTS. On the state level Dorris works with a state advisory committee to improve the standards, course alignment, and evaluation (state test) for beginning teachers. At the same time she is working to raise the standards and level of expertise for individuals entering the teaching profession in her state, state support for professional development through the NBPTS process is in danger. Legislators in her state hold the key to the continuation of funding for teachers as they go through the NBPTS process, and a stipend for teachers who become National Board Certified. Dorris is active in working with senators and representatives to make sure they understand the importance of the continuation of the state support program for the NBPTS process. She says, "I feel we have to remind them of the worth of our profession, because in difficult economic times we still need to improve education." Through the university class and other meetings of NBPTS candidates Dorris reads entries and coaches NBPTS candidates on their portfolio entries. In the district she trains other teachers in coaching, mentoring, and science inquiry. She also meets with other pre-school teachers in the district to develop literacy curriculum that is appropriate for four-year-old students across the district on varying levels of readiness.

Act III: Support Networks

Narrator: Each of the four participants mentioned the importance of support

networks before, during, and after the NBPTS process. Dan discussed the support

network that resulted from his contacts with professors in graduate school early in his

teaching career, and that network eventually led him to participate successfully in the

NBPTS process. The three other participants, Peggy, Jane and Dorris, mentioned that

without a support network they could not have been successful in the NBPTS process,

and each of them continues to work collaboratively with teachers in their school, district,

and state.

Dan's support network began early in his career when he followed the

expectation others had for him to seek a master's degree in administration. He eventually

decided he preferred classroom teaching to either being a principal or teaching in a

university, and he made the decision to work on a master's degree in mathematics.

Through math professors at the university he made contact with state and national math

organizations and began attending professional meetings where he networked with

outstanding math teachers and administrators. At first he paid his own way to state and

national meetings, reasoning that the school district he worked for did not have the funds

to pay for him to go, but he and his wife could go to national professional meetings as

part of their vacation. In his words, "I have been very fortunate with my professional

development, when I was in my first teaching position, my wife and I kind of went to

NCTM on our own because the school really didn't have the money to send me, but we

were just married, we had no kids, and so we just viewed it as a vacation and so we

would just go to NCTM."

Next Dan began speaking at regional meetings to get his way paid, and eventually, the university professors helped him to get a position on the NCTM state affiliate's board. He kept speaking at the regional meetings, "once the two professors got me involved with the state council, and I became a board member on that then the speaking engagements kept coming, so I would speak at a lot of regional meetings and that pays your conference way." With the encouragement and support from the two university professors and others within the math organizations, Dan continued attending the state, regional and national organizational meetings: "going to high level meetings and speaking at state, regional and national conferences, you learn from so many other people. You go to all of those other sessions that are down there and NCTM has great speakers. So that has really been good."

As Dan learned from other people, he was also influenced by other people, "Since I got my masters I have never felt that I didn't have people at the state level who were either helping me or pushing me to get where I was going, I was never alone." He was on a board that expected things from him and he expected things from them, and in his role as an officer his responsibilities brought him into contact with, "a lot of good teachers." The next day after our first interview Dan was going to a board meeting in a neighboring state, and he said,

> *Dan:* I feel really well connected in the five state area. Since I am the state
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> president and a delegate to NCTM I get to know presidents from a lot of the other
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> state organizations, especially presidents in my own caucus area.
>
> *Narrator:* The network of professors, math teachers and administrators Dan

made contact with through NCTM led him to the process for National Board

Certification, where he found that many of the same people on the board for NCTM were also on the advisory committee to write the math standards for NBPTS. Dan's network of professionals through NCTM and NBPTS spend time together talking about math,

> *Dan:* ...when I get together with people at the state level, I know that the thing we talk about is math, and we talk about teaching math. We talk about why we do this and why we do that and you get the little things about how my son is doing and how their sons are doing and stuff like that, but the thing we have in common is math.

> *Narrator*: Dan has friendships with other math teachers in his school, but he does not connect in a network with them to talk about math.

> *Dan:* the thing I have in common with a lot of math teachers around here [in his high school] is golf and baseball and everything else, and so when you are in a classroom eight hours a day thinking about math, when you see your colleagues in the hall it's the last thing you talk about. And so for me that's a harder thing to do. It almost has to be a meeting that is set aside to do that.

> *Narrator:* Dan and I discussed the issue of his professional work with teachers through NCTM who explored ways that they could improve math instruction. Dan gave many reasons why he did not discuss improving math instruction with colleagues at his school. First, there is little time set aside by the school and district for teachers to work on improving instruction. Next, even when time was set aside, teachers in his department did not talk about math curriculum, instruction or ways to improve it. "I think that there is something to be said about driving an hour or more or getting on a plane to fly somewhere, and

you say, "this is why we are here", as opposed to, okay, here is a Friday without kids, what are we going to do?"

What context could be set up to assure that teachers in Dan's site would dialogue about math when they had time on professional development days? Dan presented a plan with some ideas about strong leadership from administrators who should create a context with a product and accountability so that teachers would all focus on math curriculum and instruction. He even thought it would be a good idea to get all the math teachers together at the secondary school sites to focus on math curriculum alignment and instructional strategies, but he made the point that the teachers would have to know their task: "what is our task? If it's to talk about student learning that's pretty general for most people. But if there was an end product that was expected, then you get the stuff that you want."

Narrator: It was during this discussion that I think Dan finally hit on the authentic underlying reason for not networking with other math teachers in his school and district to dialogue about teaching math, and it appears to be more about a difference in philosophy and understanding about how math should be taught than most of the explanations that he offers. Only one other math teacher in his school has a similar philosophy to Dan about problem-based, hands on math instruction. This difference in a frame of reference or lens through which to look at math instruction coupled with Dan's experience with the NCTM network of outstanding teachers could make it uncomfortable for Dan to network with teachers in his school to dialog about ways to improve math instruction for at least the following three reasons:

1) Lack of common ground. It appears that the teachers may not have a common language, knowledge or understanding for discussing math in the way that teachers who attend NCTM meetings regularly would have, so it would be more comfortable to talk about family, baseball, and golf, because there is more common ground for those dialogues.

2) Lack of common purpose. Another reason for the avoidance of networking with colleagues in his school might be that they are not asking the *why* questions that Dan is asking in order to organize curriculum and instruction to meet the needs of students.

3) Lack of flexibility. If administrators are seeking curriculum continuity and pedagogical alikeness across the practices of teachers in a department, in an effort to structure the *what* (curriculum) and *how* (instructional strategies) of teaching for professionals with extreme differences in beliefs about teaching, the result might be that decisions about the pace and timing of instruction might not depend upon student feedback, but a lock step system of presentation that could really cramp Dan's style. Dan discusses his reaction to the lack of flexibility about exit tests, "I can see some reasons for departmental tests, and I can also tell you that the times we give departmental tests in trig, it just drives me up the wall. Being stuck with the fact that three of us have to get where we are going at the same time, and there's not as much flexibility drives me up the wall."

Dan's professional isolation from colleagues in his school contrasts sharply with the experience of the three other participants in this study. Peggy, Jane and Dorris stated that they believed the teachers they knew who had not successfully completed the process

for National Board Certification failed to accomplish certification because they did not have a network of people to help them. Peggy, Jane and Dorris discussed the importance of teachers who would share the latest educational research from professional journals, exchange instructional strategies important to student learning, read and respond to their NBPTS entries, give feedback in the form of questions about information they had failed to include in answer to the NBPTS standards, watch and critique their videos. They talked about how they sometimes made the mistake of assuming they had made clear their understanding gleaned from reflecting on classroom instruction. Those who read for them had encouraged them to make the data and information about their classrooms explicit. They connected with people from their school and district who were going through the NBPTS process at the same time and others who had successfully completed the national certification process. The NBPTS provided the network access for Peggy, Jane and Dorris to dialogue with teachers from across their state and nation who would read and give feedback on their NBPTS portfolio entries.

The specific networks and their influence on the participants in this study will be explored in the next chapter through the lens of network analysis within perpetuation theory. The strong and weak ties of the networks will be explored to gain a further understanding of the role networks play in channeling professional opportunities for leadership and professional growth and development for the National Board Certified teachers who participated in this study.

Act IV: The Teaching Profession: To Stay In or Not to Stay In

Each of the four participants in this study expressed anxiety when judging the opportunities they have that would require them to leave the teaching profession for a

related career. The tension involved in choosing whether or not to stay in teaching may have been heightened for participants by the increased number of opportunities for teacher leadership made available through the NBPTS network. It is ironic that one of the premises of NBPTS is to increase leadership opportunities for teachers to encourage them to remain in the classroom, yet the NBPTS network may be the source of an opportunity that leads them out of the classroom. Dan's opportunities to leave classroom teaching actually have come through university contacts and the NCTM network, rather than NBPTS, but for Peggy, Jane and Dorris NBPTS is bringing many golden opportunities to practice the teacher leadership that may take one or more of them down a new career path.

Dan talks about networking contacts that helped take his development as a professional to a higher level. Networking contacts also push Dan toward other careers such as teaching at the University level or working full time for a program such as the one NASA offers for educators. So why doesn't he leave the classroom? It is something he thinks about, especially when he faces many of the challenges unique to teaching high school students. Dan might eventually leave the classroom for something else, but at the moment he stays for a complex variety of reasons that are primarily focused on the students he loves to work with at the high school level. He also stays because he is constantly renewed by a network of professionals.

At the beginning of Dan's career a professor at a small university pushed him toward a larger university. While in the math curriculum program at the larger university he began teaching on the college level, so he has had the opportunity to experience teaching at the university level, and there are times when he thinks he will return to the

university, get his Ph.D. and become a professor. Dan's rationale for leaving would be based on two things: 1) feeling *teacher burnout* or 2) losing the block schedule at the high school. The longer class period of the block schedule makes it possible for him to teach in the hands-on, problem-based instructional approach that he values. Dan's reasons for not leaving the classroom have to do with the satisfaction he feels that he is contributing to society in a meaningful way by working directly with the students in his classroom, and the satisfaction that he is influencing preservice student teachers directly in a way that teaching education courses at a university do not allow.

> *Dan:* I have toyed around with other stuff, and people have told me to go back to
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> the university, get a doctorate and teach college. It sounds good, but when I get to
>
> looking at having to get out of the classroom and out of the coaching that I am
>
> doing, you go to a different level. I am not sure that the contribution to society
>
> that I would be making there would satisfy me like teaching in this classroom
>
> does now, because I know that I am directly influencing [high school] students.
>
> And the arguments other people give me about directly influencing students who
>
> will be teaching…I influence her [he nodded toward his student teacher] by
>
> working with her in this classroom a whole lot more than I would have
>
> influenced her when she was taking education courses from me.

The NASA job, working with interactive web sites and making NASA material more usable by teachers in classrooms sounds exciting to Dan, but he is happy in his school situation at the present time and does not want to move his family. The bottom line for him now is that he cannot see himself getting out of the classroom. Rather than leave the classroom altogether if his school dropped the block schedule because of budget

restraints, Dan might find another school with the almost 90 minute block of time that

lets him teach by facilitating students in making the deeper connections with concepts

that he believes is best for student achievement, motivation, and engagement.

Jane has opportunities that tempt her to pursue other avenues that take her

outside the classroom. She enjoys presenting teacher training in science inquiry, working

with teachers in a university setting who are candidates in the NBPTS process, and

participating as a teacher leader; however, when she gets so booked in teacher leadership

activities that she has to give up weekends with her family or leave her students with a

substitute she has to decline the extra leadership activities. Jane has chosen to begin work

on her doctorate, and although she is not sure that she wants to leave the public school

classroom for the university, she is giving enough consideration to becoming a professor

to begin preparing for a new challenge in her professional life.

Dorris feels drawn to the leadership opportunities that continue to come to her

both directly and indirectly through NBPTS. She especially seems to enjoy the training of

trainers she conducts for teachers who will become NBPTS assessors. When Dorris talks

about future challenges they all have to do with the NBPTS. NBPTS seems to assume

that National Board Certified teachers will *stay in the classroom* at the same time they are

participating in teacher leadership activities needed to promote the teaching profession by

the National Board Certification process.

Peggy's challenges at this time appear to be tied to her work in the classroom.

She enjoys her leadership, but not leadership that would take her away from being a

teacher. After all she would not want to give up the NBPTS stipend that she earned for

the next seven years. The leadership that enhances her classroom teaching and time with

other teachers without taking her away from the classroom is the leadership that helps her grow and learn within the profession. She says that at this time she has no desire to leave the teaching profession, but she is participating in teacher leadership activities on the local, state and national level that seem to bring her a lot of satisfaction.

Summary

The challenge of analyzing qualitative data in this study was approached with the understanding that it is a complex and purposeful endeavor. The sometimes overwhelming task of thinking with the data and making sense of the information from the audio-tapes, interview transcriptions, notes, and written documents was facilitated by using Feldman's (1995) recommendation of interpretation creation. Interpretation creation facilitated the explanation of description and analysis in the presentation of the data about National Board Certified teachers to an audience. Of the possible strategies Feldman (1995) suggests for analysis, dramaturgy was chosen for this study because a dramaturgical analysis is carried out by someone studying a performance and the process for becoming National Board Certified teachers is a performance. The construction of meaning for the actors in this study was documented through narrative and notes from interviews with National Board Certified teachers. The narrator/interpreter directs the audience's attention toward both surface and underlying features in the performance.

The processes of dialogue inquiry, reflection, collaboration and persistence combine to explain powerful professional development by examining teachers perceptions about the ways in which networks encourage relevant new ideas and support for the rigorous processes of developing teaching practice. The four participants reported that they found the NBPTS process to be the kind of professional growth that enhances

and improves their practice in ways that continue. The presentation of the data in this chapter appears in the following groupings: Act One: the NBPTS Process as a Catalyst for Continuing Professional Development, Act Two: Teacher Leadership Both Before and After the NBPTS Process, Act Three: Support Networks as Development During and After the NBPTS Process, and Act Four: The Teaching Profession: To Stay in or Not to Stay In.

In the next chapter the data will be analyzed through the lenses of network analysis and perpetuation theory to increase the meaning and understanding of this study. The goal will be to examine the relationships, perceptions and understandings of the National Board Certified Teachers who participated in this study to identify the potential influences these relationships, perceptions, and understandings have on the meanings for planning and implementing powerful professional development.

CHAPTER V

THEORETICAL FRAMEWORKS

In organizations, real power and energy is generated through relationships. The

patterns of relationships and the capacities to form them are more important than

tasks, functions, roles, and positions. (Margaret Wheatley, 2002, p. 63)

Dan: ...the National Board System was just so natural to what I was doing that

that made the teaching more real. It had meaning. It was just such a natural fit

that I was able to learn so much. My teaching here is not lesson driven, its

concept driven. It's unit driven. It's connections driven.

Networks such as the National Board for Professional Teaching Standards have

been known to channel and encourage relevant new ideas and support for the rigorous

process of developing teaching practice in ways that appeal to teachers. Because teachers

are directing their own learning within a professional community that focuses on teacher

development, this network of professional development has a great appeal for teachers

(Lieberman & Grolnick, 1997). The National Board for Professional Teaching Standards

recognizes accomplished teachers who continuously engage in a process for powerful

professional development that is exemplified by dialogue, inquiry, reflection,

collaboration and persistence in refining their practice motivated by the desire to equip

children for a changing future (National Board for Professional Teaching Standards,

2001).

Through the analytical lenses of perpetuation theory (Wells & Crain, 1994) and

network analysis (Emirbayer & Goodwin, 1994; Granovetter, 1973, 1976, 1986), the

purpose of this study was to examine the participant's perceptions about the ways in

which networks encourage relevant new ideas and support for the rigorous processes of

developing teaching practice. The goal is to examine the relationships, perceptions and understandings of the National Board Certified Teachers who participated in this study to identify the potential influences these relationships, perceptions, and understandings have on the meanings for planning and supporting powerful professional development.

The research questions which have framed this study are:

1.   How do National Board Certified Teachers perceive the effect of the NBPTS process on their professional development?

2.   What themes emerge from their discussion about their professional development?

3.   In what ways do these themes support perpetuation theory (Wells & Crain, 1994) and network analysis (Granovetter, 1973, 1976, 1986)?

4.   In what ways do they not?

Perpetuation Theory and Network Analysis

Perpetuation theory (Wells & Crain, 1994) and network analysis (Emirbayer & Goodwin, 1994; Granovetter, 1973, 1976, 1986) are combined here to provide a structural framework for analyzing the data from this study. Perpetuation theory offers a useful method for examining relationships or *ties* within a networking context. How do members within a group influence other members of the group? While investigating social change, network analysis is used because it offers insight in this examination of the relationships or ties members of groups can have with each other. If the ties are strong enough to hold members exclusively in a group, group members find it difficult to take advantage of opportunities outside the group. If group members move freely between groups because the ties are weak, group members can take advantage of opportunities outside the group.   In combination these overlapping theories are used here to provide a

lens for examining the professional growth and enculturation of National Board Certified Teachers.

The *strong and weak ties* (Granovetter, 1986) related to networks are explored in this chapter to gain understanding of the role networks play in channeling professional opportunities for leadership and professional development for the National Board Certified Teachers who participated in this study. Because the NBPTS process is primarily a process for accomplished teachers who demonstrate their excellence to join a community of NBPTS professionals, this study relies on *network analysis* (Granovetter, 1986) to define the relationships that lead to professional growth for the National Board Certified Teachers. *Perpetuation theory* provides a method for examining relationships or ties within the participants' networking context. Using *perpetuation theory* and *network analysis* I argue that 1) National Board Certified Teachers constitute a network of professionals and 2) such a network challenges traditional views of professional development.

Networks for Powerful Professional Development

Each of the four participants reported that professional growth during the NBPTS process was the most outstanding experience for professional development that they had ever had. The participants discussed the ways that the NBPTS process and continuing influence was beneficial in their development within the profession. The domains and themes of powerful professional development in the National Board Certification process informed the organization for the presentation of the findings in Chapter IV of this study. The presentation appeared in the following groupings:

Act I: The NBPTS Process as a Catalyst for Continuing Professional Development

This chapter holds the emerging themes from the data against the theoretical framework chosen for this study, and it is also an extension of Act III: Support Networks as Development. The themes in Act I, II and IV at times resurface as they come under the lens of network analysis and perpetuation theory because they are at times tied inextricably to the networks for professional growth. The sequence of the presentation of the sub themes for analysis, however, is slightly changed to accommodate the theoretical framework.

Act I: The NBPTS Process as a Catalyst for Continuing Professional Development

The emerging image of the *professional teacher* is one who thinks analytically about practice in the context of educational research and the experience of others, working collaboratively as a member of a network of professionals (Burroughs, Schwartz, & Hendricks-Lee, 2000). Jane offers a good example of working collaboratively with her students and a university professor to improve science instruction:

Actually I use a lot of journal writing in my science and I am doing a research

project right now with a university person on measurement. And I will often have

the children reflect after we have done a series of activities on what they have

learned...then that gives me insight...and also I take anecdotal notes while they

are engaged in an activity and I am listening to their conversations and then I

have them explain it to me and I realize that they have misconceptions, or they

are still not clear about the concept and that tells me that maybe they are almost

there, but not quite, and that tells me what to re-teach, or maybe I just need to try

a different strategy or approach.

Jane brings to light how networks engage teachers in directing their own

learning, offering them opportunities to grow in a professional community that focuses

on their development. Within networks teachers learn in ways that are more in keeping

with their lived professional lives (Darling-Hammond & McLaughlin, 1995). The

National Board Certified Teachers in this study demonstrate a shared sense of purpose

and commitment within a network that exchanges relevant information and gives

psychological support to members. In fact several times participants made it clear that

teachers, especially teachers who were from rural areas with no other candidates to

network with, sometimes were not successful in the process on the first time through.

Jane explained in the following quote how she networked with a teacher from a rural area

in another state who needed help.

The people that I have met from rural areas, they have no contact people. They

were doing it [the National Board Certification process] alone. There was an

elementary teacher who had gone through the first year in another state, when she

came here she would email me questions and I would ask her questions, and we

had this back and forth conversation over social studies, and I would give input

and feedback. I didn't tell her [answers], I would question her and there's a lot of

growth and friendship that evolved and what you gain from them [candidates you

help] makes it kind of a give and take.

Jane gives an example of *give and take* between *weak ties* and learning through

the network, and she makes the point that email can be a channel through which the ideas

can flow through the network in more than one direction. The idea of technology

networks that Jane brings up here was outside the scope of this study, but it is a worthy

inquiry for another study. Research studies cited by the National Commission on

Teaching and America's Future (November, 1997) recognize teacher expertise as the

single most important factor influencing student learning. Each of the participants stated

in the interviews that it was important for National Board Certified Teachers to be

continuous learners who represent the teaching profession well. Transcriptions of the four

participants contained several statements referencing their professional growth during the

NBPTS process and the importance of recognizing teaching as a profession. Themes of

professional development processes, including dialogue, reflection, inquiry, and

collaboration, were threaded through the discussion of the NBPTS process and its impact

upon their teaching. Peggy comes back to the topic of collaboration during the NBPTS

process in the following.

> The process was a year long growth process professionally and the important
>
> things for me were the collaboarations with my colleagues. Because you really
>
> don't... Those are things that you really have to force to have those
>
> opportunities...and not being a classroom teacher they don't happen as easily, I
>
> mean I am not in a grade level thing where I can work with other people so that
>
> was really good. I really would not have made it through the [NBPTS] process if
>
> it were not for my colleagues over here to work with, because I had to do it

[National Board Certification] out of my area of reading, and I had to do science

and math and all of those things, so I really had to have a lot of back up from all

these people, they'd come and watch me teach something and help me with it and

tell me how they teach it in their room cause I really didn't know...and give me

resources to read...things like that.

Peggy, a reading teacher, networked and collaborated with classroom teachers with

experience in teaching math and science since she worked on certification in a general

elementary area. She needed assistance in order to successfully teach outside her

specialty area of reading; however, what she learned is now influencing the way she

teaches reading through content areas.

The Decision to Participate in the NBPTS Process, Benefits and Disadvantages

So who influenced the participants to accept the challenge of participating in the

NBPTS process and who or what might possibly have held them back? In Chapter IV of

this study a representative sample was given of the participants' transcript rationale for

choosing to participate in the NBPTS process. Each of the participants had already

achieved at least a master's degree, and each expressed that they were in need of a new

challenge and a new avenue to continue development as a professional. Jane felt that the

NBPTS process could either verify that she was doing her best or show her a better way.

Dorris felt her growth was being stifled in her school situation, and she sought the

challenge of participation in the NBPTS process to enhance her growth. Peggy refers to

the NBPTS process as a growth process, but she is the only participant to talk about

getting an extra stipend as influencing her decision to voluntarily participate.

So who acted as weak ties to influence Dan to participate in the NBPTS process?

A few of Dan's influences are explored in this section to highlight a few of the *weak ties*

that encouraged him to grow and develop through participation in this process. Central

office administrators in Dan's district along with university professors and the NCTM

network brought Dan the opportunity to participate in the NBPTS process, and the

process itself challenged Dan to use inquiry, reflection and dialogue in collaboration with

other math teachers (not teachers in his building or district) to improve teaching and

student learning. The professors, district administrators, and NCTM teachers and

administrators provide an example of Granovetter's (1973, 1983, 1986) *weak ties* or

informal interpersonal networks through whom information, influence, and other

opportunities can be dispersed. These weak ties are the conductors of the beneficial ideas

that might otherwise be outside Dan's experience, and according to Wells and Crain

(1994), without these *weak ties* the information, influence, and opportunity for leadership

might not reach a teacher like Dan.

Three of the expressed disadvantages of participating in the NBPTS process were

the sub themes of stress caused by the demands of the process, the possibility of failure

and the amount of time away from family. Dan did not believe that the demands affected

him as strongly as the elementary participants expressed.

Different models in the network literature can be applied to processes such as

diffusion of innovations, and educational attainment— "as well as the more typical

processes of crowd behavior and social movements" (Granovetter, 1978, p. 1421). In the

threshold model of collective behavior, binary decisions are considered "where an actor

has two distinct and mutually exclusive behavioral alternatives" (Granovetter, 1978, p.

1422). The threshold is the point where the individual perceives that the benefits to

participation in a particular thing transcend the costs (Granovetter, 1978). Granovetter

uses participation in a riot as an analogy for interpreting the threshold where a person

would decide that involvement in the riot was of more benefit than the cost of taking part.

In this study the participants' decision to participate in NBPTS was socially influenced by networks of people within their experience. Although time away from family was a disadvantage, the participants were supported by their families to meet the demands of the process. The participants' concern about what other people would think if they did not successfully complete the process or if one of their friends did not achieve the certification and they did was stressful, but it was not a deterent to volunteering to participate. The extreme challenge of participating in the process was demanding, but not a high enough demand to change the particpants' minds. Therefore the possible *strong ties* of family and friends or other acquaintances who might think less of the particpants if they spent a great deal of time away from them or if they failed to achieve certification, did not hold them back from participation in the process for National Board Certification. *Strong ties* were not strong enough to keep them from taking advantage of the certification opportunity as the NBPTS participants paused to contemplate the pros and cons of involvement on the *threshold* of their decision.

Act II: Teacher Leadership

In the previous chapter the demonstrated teacher leadership of the participants was explained in greater detail than the summary in this chapter. Three of the participants were involved in teacher leadership opportunities before participating in the NBPTS process, and one was not. All four participants have been actively involved in teacher leadership since their participation in the NBPTS process.

Dorris was the NBPTS participant who was not involved in leadership activities before participating in the NBPTS process. As teacher leadership comes under the theoretical lens of investigation, Dorris becomes the focus. In this network analysis about leadership it seems apparent that she did not have the opportunity in the small community she taught in before participating in the NBPTS process to be a teacher leader. Feeling

professionally stifled within a small school of teachers, the majority of whom were not seeking growth, Dorris found out about the NBPTS process through a *weak tie* (fellow teacher who became a principal in another district). She made the decision to volunteer for participation and her application to her state for assistance in the process brought her to the attention of a larger district who then offered her a teaching position. It seems fortunate for Dorris that she was then able to leave the small school where *strong ties* were not encouraging her growth to move to a larger district where she could join a network of teachers involved in the NBPTS process. Through the NBPTS network she not only received information that helped her to succeed in the process, but her successful achievement of National Board Certification within her new network of teachers brought many new leadership opportunities her way.

Dorris became an assessor for NBPTS and then a trainer for other assessors of the NBPTS process. Through her assessor training Dorris covered a sub theme that is not mentioned in perpetuation theory (Wells & Crain, 1994) and network analysis (Emirbayer & Goodwin, 1994), but is included in Garmston and Wellman's (1998) definition of dialogue to improve teaching. Dorris said, "You learn to suspend biases and assumptions as you work together." She was talking about working with a diverse group of individuals who sometimes disagree, and she said that sometimes you just agree to disagree. It was evident in her discussion that Dorris had found the key to successful collaboration within a diverse group through her NBPTS training and experience.

The NBPTS Network of Learners

So what do National Board Certified Teachers dialogue about when they meet with each other? One thing that they discuss is professional research, articles, and books. Dorris discussed the teacher dialogue after candidates read a lot of professional journal and research articles that teachers in her network shared with each other:

You [NBPTS teachers and candidates] do a lot of professional reading and research, and we would say, "Have you thought about this?" "Did you think about that?" There is that support system and that research out there that you draw from....So we worked with each other together and we helped each other solve different [problem] areas.

One of the ways the teachers in Dorris's network would help each other was to read and make sure that the information that was given in answer to a question was relevant. Dorris describes such an incident in the following:

For instance, we joke about this, but we were reading one of the papers and she was doing an Australian unit and in her writing she said, "I had saved brown paper sacks for two weeks in my garage and I brought those from the garage into the classroom and we cut vests out of them." Well, you know you say, "Hey, they don't care if you kept them for two weeks in your garage." So there was information [feedback] like that when you are reading that you try to help your friends decide what is relevant. What do paper sacks in a garage have to do with anything?

Dorris also describes her networking with other pre-K teachers, some of whom are National Board Certified Teachers, and some of whom are National Board Candidates. The National Board Certified Teachers facilitate the other pre-K teachers who are going through the NBPTS process, but their networking also involves working together on other curriculum projects. Presently they are working on building literacy through a particular program that was intended for Kindergarten students. The material has to be adapted to the four-year-old students, so the teachers need to share with each other what works and what does not work. As a group the pre-K teachers in the district are continuing to work together in the following way:

I read the information [about the literacy program] and I put that with what

Ashley [a National Board Certified Teacher at another school who went through

the certification process at the same time as Dorris] and I talk about that works,

because there are some things that she and I are doing in the classroom that we

talk about so yes we still have that connection and we draw on each other as a

professional base of support.

When I asked Dorris if she thought they would have had that base of support had

they not gone through the NBPTS process together she replied:

No not at all. I think that the process had helped each of us to grow personally

together as a group. I think that when you go through this process you have to put

your biases aside, and you develop friendships that you might not have made

otherwise, because that is another part of the process—putting aside your biases.

You learn to suspend biases and assumptions as you work together.

I next asked Dorris if she thought that the teachers who were working together

had learned to trust each other and she answered quickly:

Yes and I think that the other thing is that you find that it is okay to agree and it

is okay to disagree. We sometimes agree to disagree, and that does not threaten

our relationship…Within the group that I am reading for I have built personally

and professionally relationships that I would not have otherwise.

In addition to continuing networks with other teachers in their schools and

districts, the three elementary teachers spend a great deal of time with networks of

teachers whose purpose is to share information and ideas that will assist candidates in

successfully completing the NBPTS process. When the three elementary participants

were going through the NBPTS process they assisted each other by reading entries and

asking pertinent questions in an inquiry approach. Because of their experience the

elementary participants say it has become *natural* to network with other teachers in their school and district professionally. According to Peggy, Jane and Dorris, it has become natural to continue the reflective professional development processes that they began during the NBPTS process. Regardless of the stressful demands of extra time and effort, and the risk that the results will not always be what was desired, the participants continue to network with colleagues in their school, district and state.

Perpetuation theory and network analysis are useful in tracking the flow of new ideas and opportunities for leadership, but the combined theories do not suggest ways that diverse groups of individuals can learn to work together productively. Garmston and Wellman's (1998) research could be a useful addition to network analysis research, especially when considering particular ways trained individuals can shape and influence groups. Teaching group members how to approach issues in ways that keep them unbiased and open to other viewpoints could not only improve the flow of information and ideas, but increase the knowledge base for participants. For Dorris, Peggy, Jane bias training came to them through the NBPTS assessor training after their completion of the certification process, but it has been useful as a strategy in working with other groups of diverse people in collaborative settings.

Act III: Support Networks as Development

Who do the National Board Certified Teacher participants network with to improve their teaching? When focusing on networks the reader needs to understand that while the *micro* focus is on certain groups of network connections, the *macro* focus would show that these are merely subgroups of networks that are often times connected to each other. For example, the university math professors mentioned in this study connect with the National Council for Teachers of Mathematics, and members in the National Council for Teachers of Mathematics network with the NBPTS through leaders

and other members. To bridge the *micro-macro* gap investigations by network analysts are carried out with both individuals and groups, because of the dualism or interrelatedness of groups and actors (Emirbayer & Goodwin, 1994). In other words, individuals connect with many different groups at the same time, and the groups they connect with might also be related in purpose and connected through other individuals. An example of groups with a related purpose who are also connected through individuals is the National Council of Teachers of Mathematics and the National Board for Professional Teaching Standards whose pedagogical math standards are almost identical. Dan discussed the duplication of people on both boards, about a third of the board members for the organizations were engaged in writing the math standards for both groups, and the duplication of leadership accounts in part for the pattern of interrelatedness between the two groups. As Dan stated in the previous chapter, the pedagogical standards of both groups "dovetail" with each other. The replication of NCTM members who like Dan are also NBPTS certified teachers connects the two groups further.

The following enumeration of groups is not offered as a comprehensive list, but it provides a representation of some micro networks which are *weak ties* for information, innovation and opportunities for growth for the NBPTS participants:

1. Participants network through professors in the university setting.

2. Participants build networks through national organizations such as the National Council of Teachers of Mathematics, the International Reading Association, National Education Association, and the National Association for Educating Young Children.

3. Participants network through the National Board for Professional Teaching Standards.

4.　Participants network through connections they form with other teachers on a regional or state level.

5.　Networking opportunities come through individuals in the participants' district and school.

University and Content Area Networks

Before, during and after the NBPTS process each of the participants networked with professors and fellow students through graduate school who helped them to learn what they needed to know as professionals. For example, Dan was pushed and encouraged by at least three different professors to participate in the National Council for Teachers of Math on the state, regional and national level. The professors were instrumental in getting Dan a position on the NCTM state affiliate's board which meant that the professional development that he sought through NCTM would be paid for by the organization. He has continued his association as an officer in the NCTM and is presently the president of the state affiliate. As an officer he meets frequently to dialogue about math curriculum and instruction with other teachers in the state, region and nation. Dan's association with NCTM teachers and administrators, his experience working with the national math standards in the context of exchange with other accomplished teachers, and professional development opportunities through NCTM brought his first epiphany about teaching. He began matching his teaching to the NCTM standards for curriculum and instruction with a hands-on, project-based approach, rather than a more traditional lecture-type teaching approach. Other teachers were incorporating the NCTM standards about math and pedagogy into their teaching and then coming back together to share what they were doing. The NCTM members' practice, according to Dan, was changing in ways that focused on reflection and adjustment in using the best instructional strategies for helping students to learn. Dan was feeling like things were going well in his classroom.

He thought his students were responding well to his teaching. His experience with NCTM made him feel that the NBPTS process would be "smooth sailing" or straightforward for him since he already had experience with the NBPTS teaching standards that "dovetailed" with the NCTM standards. However, to his own surprise, he enhanced his teaching practice and improved the learning for his students when he participated in the NBPTS process. It seems the explicit, reflective NBPTS certification process pushed Dan to look more closely at *why*, *how* and *when* mathematical concepts should be presented to students in his classroom than he ever had before, and the result of his inquiry and analysis was for him another epiphany. Evidently, Dan's reflection had not been in such a, "write it down" and explicit format, and what he learned through the NBPTS process was surprising to him.

The elementary participants also are connected in various ways with the university and national organizations. Jane networks with university professors ,as was noted in the previous section, by collaborating with a university professor on a research project in math in her classroom, teaches a university class, and is beginning work on her doctorate. She is active in the National Association for Educating Young Children, the International Reading Association, and the local affiliate of the National Education Association, as well as being actively involved with NBPTS on the state, regional and national level. Peggy, who has a doctorate, helps to teach the university class for National Board Candidates. She also is president of her local NEA affiliate, works with the International Reading Association, and is actively involved with NBPTS on several levels. Dorris who has a master's degree, certification as a principal, and certification as a reading specialist also helps to teach the university class of National Board Candidates. She is also involved with the National Association for Educating Young Children, and heavily involved in the NBPTS on several levels.

The above examples of networks with the weak ties of university and content area connections also document the participants' involvement in organizational networks. The sections are connected and interrelated, and good representations of the candidates' involvement with weak ties.

Organizational Networks

Who else did the participants network with before, during or after the NBPTS process that might also represent the *weak ties* that bring professional learning opportunities to the National Board Certified Teachers? During the NBPTS process Dorris, Peggy, and Jane networked with a group of NBPTS candidates and National Board Certified Teachers within their school and across their district who met on a regular basis to support candidates going through the NBPTS process. The participants also networked with NBPTS candidates and teachers they found on the NBPTS network who were from other states that they communicated with through email or by telephone. Now they actively assist other teachers who are going through the NBPTS process by working with a university class and also helping other teachers in the state or nation who contact them through the NBPTS network. Other state affiliates and national organizations such as the National Education Association, International Reading Association, National Science Foundation, National Council of Teachers of Math, and National Association for the Education of Young Children offered learning opportunities and networks for the participants before, during, and after their participation in the NBPTS process.

NBPTS Networks

What other opportunities might be available through the network? The NBPTS network continues to bring chances for the three elementary teachers to work with other outstanding teachers when they spend time each summer assessing the portfolio entries

from NBPTS candidates. Dorris also trains the assessors in evaluation and bias training. This is an example of the continuing work the three elementary teachers do with NBPTS, but it is only a part of their NBPTS involvement. The three elementary teachers also work with a state committee to support and enhance the NBPTS process for teachers in their state. Dan as a leader in the NCTM network continues to work with the development of the NBPTS process for participating math teachers who are seeking NBPTS certification.

Within their district and schools the three elementary teachers are leaders in developing curriculum and training teachers for improved practice. Examples of their intense involvement were more fully explained in Chapter IV. As stated before, Dan keeps a low profile in his school and district, usually socializing, but not discussing professional issues with his colleagues.

Possible Professional Network Disrupters: Strong Ties

With whom did the participants have *strong ties* that might be barriers to their growth? Which people in their experience might have caused them to think twice about going through the NBPTS process? The three elementary participants mentioned the immense amount of time they spent away from family and friends as a difficulty in making the decision to participate and continue to participate in the networking processes. During the NBPTS process networking took time away from friends and family outside of the NBPTS group, because the participants networked with teachers before and after school and on weekends. The connections with NBPTS and other national organizations continue to infringe on family and friends outside the organizational network. The elementary participants are very connected with the NBPTS network within their school, district, region, state, and on a national level. In fact, they have more opportunities than they have time to accept. Sometimes they just have to say, "No" to the demands of the network, but they pick and choose which activities and which

people they will be involved with, because the bottom line is that the network is a professional lifeline.

Dan's *strong ties* might be represented by the math colleagues in his high school. They could be considered a *micro-structure* or *clique* that has a dominant philosophy that would be considered more traditional. Since they are in the majority, teachers at his high school are a critical mass that would continuously bring pressure on teachers to teach as they teach. Their traditional approach is usually to lecture, assign and assess, rather than use inquiry and reflection to inform adjustments in practice for the purpose of increasing student learning. The majority of Dan's colleagues want students to learn, but they are not a part of the networks of NCTM and NBPTS. Perhaps *strong ties* with other people who think as they do, or family commitments or the increased stress, effort and discomfort of change stop Dan's colleagues from adopting a more hands-on or problem-based approach like the one Dan uses with his students. It is evident that Dan values his colleagues enough to socialize with them, and not to mention his own math practice in the classroom. It appears that Dan is concerned that discussions about math instruction with his high school colleagues might be frustrating to him, because they could threaten the friendships. Dan keeps hoping administrators in the district will create a context for math teachers to come together to talk about math instruction by requiring a product from the process. This would make it socially acceptable for Dan to guardedly share his expertise without disrupting the social network of math teachers in his school.

Dan believes that there is a risk that the *strong ties* with his colleagues in the high school could pressure him to teach as they do. According to Granovetter (1994), "Where a teachers' clique is dominated by a particular teaching philosophy, for example, one might expect classroom practices consistent with this philosophy to receive strong social support" (p. 82). Social relations are important in network analysis where teachers like

Dan can receive social support for certain practices and feel pressure to maintain them (Granovetter, 1994). Evidently, Dan has bridged the "micro-macro" gap by maintaining *social contact* with math collegues at his high school but maintaining *professional ties* with outstanding teachers through his involvement in professional organizations. Dan continues to grow as a professional through his NCTM and NBPTS networks without damaging the relationships he has with his school and district colleagues. The professional networks allow Dan to grow within a context that encourages professional development while teaching in a context that does not promote sharing relevant ideas for development and change in professional lives.

Networks for Teachers Who are Passionate about Personal Professional Development

How do the National Board Certified Teacher participants network with colleagues in order to *develop as professionals*? To represent historical change, a social network is interpreted as a network of meanings where stories and narratives describe the ties or connections in networks, or in other words a social network is a network of meanings that can be determined by analyzing narrative (Emirbayer & Goodwin, 1994). If cultural and societal networks shape individuals, then individuals are also actors in shaping groups, and individual stories and narratives can be deeply explored for explicit analytical themes to "discover the ways in which actor's identities are culturally and normatively, as well as societally, determined" (Emirbayer & Goodwin, 1994, p. 1446).

For example, each of the four participants had a desire to obtain information, to influence and be influenced by other teachers, and to access opportunities to continue their growth and development. Granovetter's theory of *strong and weak ties* endorses the connections between *weak ties* and the persistent ability to risk change in order to grow and improve practice. The NBPTS participants move themselves along, whether it is because they do not want to burn out, or because they cannot stand to *not* know things

that other teachers know. The *weak ties* that influenced and offered opportunities were exerted on teachers who already had a burning desire to develop their own practice and connect with other teachers to improve the profession.

The three elementary participants commented that they were stressed by the risk of participating in the NBPTS process, they knew that they might not be successful and it would embarrass them not to be successful, but they pressed on to take the challenge for a number of reasons demonstrated in the following interview narrative:

Jane: Having a master's degree just wasn't enough. I needed more. I desired more, and I thought the National Board Certification process would provide that for me.

Dorris: I was at the point that I wanted and needed other opportunities for myself professionally, and I needed more for my students as well.

Peggy: You know it takes a certain amount of drive to even try to become National Board Certified.

Dan did not verbalize as much about an inner drive that pushed him to achieve, but his actions in attending the NCTM conference with his wife and calling it their vacation join with the decision to begin work on his master's degree early in his career to shout his desire to constantly learn more and grow as a professional. Dan talked about the need for teachers to develop within the profession and he talked about NBPTS as coming at just the right time for him in his career. When I asked Dan what his next challenge would be he replied, "My next challenge is to stay at this level and not get burned out."

A possible reason that the participants are able to function at a higher level of teaching performance and development without burning out is that they are constantly being renewed and nourished through the *weak ties* that help teachers come into contact with other professional teachers who think analytically and systematically about practice

(Burroughs, Schwartz, & Hendricks-Lee, 2000). In considering weak ties it appears that Dan makes a distinction between a network with a professional purpose and a network of professionals with a social purpose. From Dan's interview an idea emerges of a possible distinction between a social and professional network.

Social versus Professional Networks

In the dialogue about networks, can a distinction be made between social and professional networks? In my study of network analysis and perpetuation theory in the work of Granovetter (1973, 1976, 1986) or Wells and Crain (1994) or Emirbayer and Goodwin (1994) no distinction was made between a social and a professional network. In applying perpetuation theory and network analysis to this study I noticed that all of the structures in the theories for the strong and weak ties were categorized as *social structures*. However, in this study the NBPTS participants made a distinction between *personal or social networks* and *professional networks*. Dorris, Peggy, and Jane made a distinction in the language they used to describe their growth, and Dan made the distinction through his discussion of the ways he networked with colleagues in his school. He had golf, baseball, and the discussion of their sons and daughters in common with other teachers in his school, but his colleagues did not discuss math curriculum or the teaching of math even when times such as professional days were set aside for that purpose. Dan did, however, meet with other math teachers through professional organizations affiliated with NCTM to dialogue, inquire, reflect and collaborate about math instruction.

The three elementary participants' personal and professional networks sometimes would merge, and that is understandable since they networked professionally with teachers in their own schools. However, Dan's personal and professional networks were distinctly separate. That is, the math colleagues in his school were *social contacts*,

whereas his *professional network* was outside his school and district. If the participants in this study are a representation of other teachers in the profession, I wonder if the teacher isolation that some authors such as Bolman and Deal (1994) discuss, should be more descriptively termed *professional isolation*. It appears evident that social networks can exist within schools where professional networks are practically nonexistent.

The participants in this study also brought to light a possible reason that professional networks do not exist within schools; networks are difficult to maintain even if and when administrators work to create a context that supports professional networks. Social networks can exist in schools and districts without administrative support, but professional networks are more dependent upon administrators actively creating a context for professional growth.

Networks as Difficulty

What are some of the disadvantages connected with professional networks? The elementary participants discuss the networking connections that they made during and after the NBPTS process in terms of the challenges and benefits of working with other professionals in their school. Collaborating with teachers in the network is not without difficulty or personal sacrifice, but the elementary participants maintain that the benefits outweigh the trouble. Some of the challenges and benefits of networking will emerge in the following presentation. In keeping with the language of network analysis, the following excerpt from Peggy reveals that the network of professional learners encourages *relevant new ideas and support for group members* in the demanding process of developing teaching practice:

> Now it is almost a natural thing to try to develop these networks of teachers,
> because you realize how valuable they can be, and sometimes we get a little
> frustrated with our PEAK thing [a project where the reading specialist, gifted

teacher and classroom teachers often work together to team teach groups of students]. Sometimes I ask myself, do I need this headache? I mean somebody doesn't do the lesson they were supposed to do and the timing is off and it gets goofed up, but now I almost think that I have to have the networking. I can't just have some kids in here and try to teach them how to read. I've got to have some opportunities to do other things and to teach in other areas, and I need the feedback I get from my colleagues.

Evidently the threshold where the four participants decided whether or not they will continue to participate in a network of their colleagues was considered and crossed by each of them. Each valued networking with other teachers for their own development. For Jane and Dorris as well as Peggy, many of their opportunities are within their schools and districts or in some way tied to the National Board for Professional Teaching Standards. Dan has the majority of his networking opportunities through NCTM and its affiliates, but he also is networked with NBPTS.

As an aside, the elementary participants mentioned support from the central office in their district to continue their inquiry and professional networking. Dan longed for the right kind of intervention from school or district administration to smooth the way for him to collaborate with colleagues for math instruction improvement.

Act IV: The Teaching Profession: To Stay in or Not to Stay In

The participants in this study were constantly caught in the dilemma of either staying in the classroom or leaving to pursue related opportunities. The tension involved in making the choice seemed to be heightened by the increased opportunities that came to them through the NBPTS network. Each of them made the decision to stay in the classroom for the time being, but their decision is contingent upon their continuing growth and network opportunities. (This was discussed in more detail in Chapter IV.)

The participants' decision to remain in the classroom appears to be consistent with the persistent pursuit for growing and developing that brought them to the NBPTS process. As long as they do not burn out, as long as they continue to be renewed in order to meet the challenges of the classroom, and as long as other opportunities do not offer the kind of satisfaction the participants believe is a valuable part of teaching, they will remain in the profession. Here, again, is a time when the threshold model could be applied to a decision within perpetuation theory and network analysis, however, the NBPTS participants' decision to remain in teaching is a threshold that moves on, but does not necessarily go away.

Persistence in Professional Development

The National Board Certified Teachers who participated in this study have the attitude that if the context in which they teach does not help them to grow professionally, they will either seek a new context in which to work or create their own context for professional development by networking with others through a university or a professional organization. The participants verbalize persistence in seeking opportunities for professional growth and development throughout their interviews. When the participants find themselves in contexts that do not promote growth and development, they either find ways to change to another context or they develop ties outside the immediate context. The four participants in this study offer evidence that they persist in constantly seeking learning opportunities and within those learning occasions they develop networks for growth. Early in their careers as a teachers each of the participants was working on formal education that not only brought them more knowledge of teaching, but courses at the university also brought contacts that were beneficial in helping them to develop a network of associates. The saving grace of network analysis

and perpetuation theory is that individuals who want to grow can, regardless of the context in the school or district where they teach.

At least two NBPTS standards support the findings analyzed in this chapter:

Standard VIII: Professional Partnerships

Accomplished teachers work as leaders and collaborators in the professional community to improve programs and practices for children and their families.

Standard IX: Reflective Practice

Accomplished teachers regularly analyze, evaluate, and synthesize to strengthen the quality and effectiveness of their work.

Summary

Two research questions which framed this study were addressed by analyzing the data in this chapter. What themes emerge from National Board Certified Teachers discussion about their professional development? In what ways do these themes support perpetuation theory (Wells & Crain, 1994) and network analysis (Granovetter, 1973, 1976, 1986)? Results obtained from the data suggest that this framework can be applied to this community. Members see themselves participating in networks that help them grow and develop within the profession. They believe that the NBPTS process and the continuing experience of applying the powerful professional developent processes of reflection, inquiry, dialogue, and collaboration with other teachers improves their practice. They expect to continue to practice the processes of powerful professional development and to be supported and encouraged by the contexts in which they work.

When asked about the NBPTS process and their professional development, the NBPTS participants identified the following themes and sub themes:

Act I: The NBPTS Process as a Catalyst for Continuing Professional Development

Act II: Teacher Leadership

Act III: Support Networks as Development

Act IV: The Teaching Profession: To Stay in or Not to Stay In

The applicability of these themes was substantiated by documents dedicated to the themes that were related to NBPTS and powerful professional development.

CHAPTER VI

SUMMARY, CONCLUSIONS, STUDY IMPLICATIONS AND FINAL THOUGHTS

This study was an investigation of powerful professional development of four

NBPTS teachers after the National Board Certification process. The aim of this study was

to apply perpetuation theory and network analysis to data gathered to determine whether

or not NBPTS teachers perceived the certification experience as improving their practice

in ways research has determined improve student learning. All four teachers viewed the

NBPTS process as beneficial in improving their practice in ways that are continuing.

Three of the four participants view the National Board for Professional Teaching

Standards as a network that channels and encourages meaningful new ideas. The fourth

teacher is active in NCTM and the state affiliate of NCTM as his network for continuing

new ideas for professional practice. Data gathered in this study continue the argument

that 1) National Board Certified Teachers constitute a network for professionals, and 2)

such a network challenges traditional views of professional development.

Perpetuation theory and network analysis were used as the lens through which

the continuation of changes in practice continue after teachers achieve NBPTS

certification. Braddock (1980) originally developed perpetuation theory, a micro-macro

sociological theory of racial segregation, to understand the tendency of black Americans

to perpetuate racial segregation. Wells and Crain (1994) expanded on Braddock's theory

of perpetual segregation by considering it alongside network analysis to add a more

structural argument that segregation is perpetuated across generations because "African-

Americans and Latinos lack access to informational networks that provide information

about, and entrance to, desegregated institutions and employment" (Wells & Crain, 1994,

p. 533).

Granovetter's (1973, 1983, 1986) work emphasized the importance of weak ties or informal interpersonal networks, which might consist of acquaintances and friends of friends through whom information, influence, and opportunities can be dispersed. Individuals who have strong ties use the strong ties as the predominant frame of reference according to Granovetter (1973). McPartland and Braddock (1981) point out that an individual's goals and career decisions are strongly influenced by people with whom a group member has strong ties.

Emirbayer and Goodwin (1994) in their assessment and critique of network analysis emphasize that different models in the network literature can be applied to processes such as diffusion of innovations and educational attainment. In analyzing the meaning of the micro-structure involving cliques, consideration must be given to the hierarchy and the influence of the culture upon individual action and ideas. "Where a teachers' clique is dominated by a particular teaching philosophy, for example, one might expect classroom practices consistent with this philosophy to receive strong social support" (Granovetter, 1995, p. 85). Social relations are important in network analysis where teachers in schools can receive social support for their practices and feel pressure to maintain them (Granovetter, 1995).

Powerful professional development for teachers is defined by Guskey (2000) as:

> those processes and activities designed to enhance the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve the learning of students. In some cases it also involves learning how to redesign educational structures and cultures. (p. 16)

Implementing the powerful professional development processes in teacher practice is challenged by ethical, structural, and cultural dilemmas within traditional school contexts (Sparks, 2002). In addition to school contexts, successful implementation of the powerful professional development processes is also dependent upon teachers who are mature enough to trust each other, skilled in group processes, and committed to improving student learning (Garmston, 2003).

This qualitative case study focused on professional development that National Board Certified Teachers reported experiencing during and after the NBPTS process. Relying on perpetuation theory (Wells & Crain, 1994), network analysis (Emirbayer & Goodwin, 1994; Granovetter, 1973, 1976, 1986), and the concept of powerful professional development (Guskey, 2000; Sparks, 2002), the participants' experiences were interpreted as a catalyst for continuing teacher development that improves student engagement, achievement, and motivation. The processes of dialogue, inquiry, reflection, collaboration and persistence in refining practice for student learning were combined to explain powerful professional development that assists teachers in consistently investigating student learning and adjusting teaching to meet student needs.

Because the National Board for Professional Teaching Standards is a network that channels and encourages meaningful new ideas, it supports the rigorous process of developing teaching practice within the practical setting of the teacher's classroom. Although the process is rigorous, it is also relevant and has an appeal for teachers who like to direct their own learning within a community that focuses on teacher development and student learning (Lieberman & Grolnick, 1997). Using perpetuation theory, network analysis and the definitions from powerful professional development I continue the

argument that 1) National Board Certified Teachers constitute a network for professionals and 2) such a network challenges traditional views of professional development.

Traditional views narrowly define professional development within a strict classification of activities and a measurement of time. (Guskey, 2000; Sparks, 2002), Acceptable activities such as workshops, university courses, or presentations by experts are valued. The formal measurement of the amount of credit or the value of such an activity is then held within the parameters of the amount of time spent in an activity. Within the traditional view teachers and administrators are held accountable for their professional growth by a prescriptive checklist or the measurable state test score performance by their students. Traditional views of teacher and student evaluation are prescriptive and quantifiable, and therein is their appeal to groups who want to hold educators accountable by quantifying and measuring something.

The National Board for Professional Teaching Standard's promise to improve student achievement may not be verified by state test scores alone, as has been the usual approach to evaluation of the program by its critics. An evaluation of the value of NBPTS and National Board Certified Teachers by student test scores concurs with the concept of a prescriptive checklist of teacher behaviors to prove a teacher is accomplished. It is attribute oriented rather than process or relation oriented, and I argue for the more meaningful qualitative approach of using network analysis and perpetuation theory to assess the perceptions of National Board Certified Teachers when checking the value of the program.

To enhance this study's internal validity, triangulation of data, member checks, peer examination, and an examination of researcher bias were used. External validity was enhanced in the plan for the study by an audit trail of data collection and analysis which

was kept to provide an accurate and detailed record of the methods and the decisions made during the study. Researcher bias, sample selection, data collection, and data analysis were presented in this chapter to augment the reliability of this study. Triangulation in addition to an audit trail of documents, protocols, and notes was maintained. To support reliability an audit trail of documents, protocols, artifacts, and notes was maintained.

Through the analytical lenses of perpetuation theory (Wells & Crain, 1994) and network analysis (Granovetter, 1973, 1976, 1986), the purpose of this study was to explore individual teachers' perceptions of their openness to new ideas through inquiry and reflection, networking with other teachers and persistence in refining their practice in order to understand accomplished teaching that makes a difference in student learning. In what ways do these themes support perpetuation theory and network analysis? In what ways do they not?

Findings identified by the National Board Certified Teachers in this study were: 1) the participants consistently described the NBPTS process as powerful professional development that acted as a catalyst for continuing change in practice, 2) each of the participants described the impact of the NBPTS process as powerful professional development that came through the network of weak ties, and this challenges traditional views of professional development 3) networks for the NBPTS teachers were differentiated by gender and level, for instance the women who were elementary teachers networked with other teachers in their building and district, while the male secondary teacher did not network with teachers in his building, 4) the insights gleaned would not have been so apparent without perpetuation theory, network analysis and the theories' description of the strength of weak ties. Distinctions that participants made that were not

addressed by the theories were: 1) the differentiation of a social versus a professional

network represented by the secondary teacher who networked with teachers on a state,

regional, or national level to talk about math instruction but only networked socially with

teachers in his building. 2) the theories did not describe the individual's inner drive or

commitment to personal professional development revealed by each of the participants.

Findings Which Support the Theoretical Framework

Themes identified by the National Board Certified Teachers in this study were

similar to other groups in that the participants specified: 1) relational rather than a

categorical explanation for social behavior, 2) stresses and disadvantages of change, 3)

advantages and benefits of change, 4) the context of support networks to both constrain

and enable, and 5) barriers to continuing contact with group members who have disparate

backgrounds and beliefs.

Relational explanation for social behavior. Network analysis (Emirbayer &

Goodwin, 1994) has a basic theoretical presupposition that is *relational*, between the

individual and society, between *micro* and *macro* and the structuring of social action by

objective, *supra-individual patterns* of social relationships. In other words network

theory builds its explanation for human behavior from patterns of relationships and the

relationship of individuals to groups as well as the relationships between groups.

Perpetuation theory and network analysis direct attention to network ties while

suppressing the consideration of their substantive content. Network theory follows the

point of departure Emirbayer and Goodwin (1994) called the *anticategorical imperative.*

Whether individual or collective, this imperative "rejects all attempts to explain human

behavior or social processes solely in terms of the categorical attributes of actors"

(Emirbayer & Goodwin, 1994, p. 1414). In other words the social system is based on the

interaction of social relationships; it is a structure in *process* (Emirbayer & Goodwin, 1994). Network analysis was a good fit in this study of participants who have successfully completed the NBPTS process by networking with other individuals, because it gives a relational perspective to the continuing growth processes for individual teachers who have attained professional status.

The purpose of the National Board for Professional Teaching Standards is to build a profession through a strong *network* of support to aid the enculturation of teachers into a profession and to elevate the status of teaching. National Board Certified Teachers join a network focused on changing teaching practice for better student learning (Bacone, 2002), rather than a group which is focused on acquiring similar attributes. Better student learning is the result when teachers use reflection, dialogue, collaboration and inquiry that is focused on student achievement, motivation, and engagement. Teachers who are coached by colleagues in the everyday setting of the classroom exemplify professional development that is entwined with practice and responsive to student need (Sparks, 2002). Thus, development of new teachers occurs continuously through relationships with accomplished professional teachers who are focused on the results of their practice (Schmoker, 2002). Teachers who are striving to accumulate attributes as determiners of the effectiveness of their practice may find that attribute acquisition is difficult to document outside a supportive context of colleagues.

While school context was ignored in early professional development studies, recent research emphasizes the importance of context in supporting teacher growth (Guskey, 2002). What NBCTs who participated in this study shared was a desire to grow and develop within the profession of teaching, and even if the school they teach in does not offer a context that promotes a teacher's professional development, teachers can

choose a network through NBPTS or a national organization in a content area as their

support system for professional growth and development. Teachers who are focused on

student learning in their classroom with support from a network of weak ties through

which information, ideas and other forms of professional learning flow also need the

critical encouragement of colleagues to do whatever is necessary to ensure student

learning.

The idea of *relationships and networks* is important to the professional

development of teachers (Lieberman & Grolnick, 1997), and it contrasts sharply with the

idea that many teachers practice in professional isolation. Professional isolation may be

an oxymoron, because if teachers isolate themselves from other teachers they could not

be part of a profession. *Teacher isolation*, that is, a situation such as Dan described where

individuals socialize with each other, but do not collaborate to discuss teaching or reflect

together on student learning, would be a *strong tie* that might encourage teachers to

perpetuate traditional views of teaching and learning such as lecturing, assigning and

assessing without establishing a relationship with students through interaction. The

purpose for teacher interaction with students is relational. As teachers focus on students

and their progress as learners the feedback from students gives teachers the information

required to adapt instruction to the unique needs of the students.

When teachers close the classroom door and teach as they have always taught, it

perpetuates traditional views in a way that is analogous with racial segregation that

perpetuates segregation for generations. *Strong ties* prohibit the growth and forward

movement of individuals who are held apart from information and ideas. When

considering improvement of teaching practice and student learning, the idea of

professional relationships for accountability is more in keeping with processes that

promote growth than the idea of prescriptive checklists of attributes accomplished teachers should have or the consideration of student scores on high stakes state tests.

Stressors and disadvantages of change. Perpetuation theory using Granovetter's (1973) measure of the strength of a tie notes that *strong ties* would most likely be found within subgroups or cliques. Strong ties are the predominant frame of reference for a particular setting, and individuals who have strong ties to a particular setting or group would find it difficult to bridge between the group they are in and a new group. McPartland and Braddock (1981) point out that an individual's goals and career decisions are strongly influenced by people with whom a group member has strong ties.

If we go back to the comment that Dorris made about the "intense, scary, very intimidating process" a parallel could be drawn between the risk of participating in the NBPTS process that has every promise of changing a teacher's thinking and behavior and the risk of racial integration into a society's mainstream for an individual who knows it probably will not be as comfortable to move into the mainstream than to remain in a comfort zone. The NBPTS in its effort to strengthen the profession moves toward a substantive change, rather than a technical adjustment by providing a network where teachers are accountable for their practice through a portfolio where they must document the effectiveness of their work with students for other trained teacher assessors.

In this study possible strong ties were the sub themes of stress caused by the demands of the NBPTS process, the possibility of failure and the amount of time away from family. Although the strong ties of stress caused by the demands of the process, the possibility of failure and the amount of time away from family and friends were present they were not strong enough to cause the participants to resist the opportunity to become a Nationally Certified Teacher.

Advantages and benefits of change. Two advantages of change in practice for teachers are better student achievement and less chance of burnout because they feel overwhelmed by an inability to meet the needs of students (Lieberman & Grolnick, 1997). Teachers who are networked with other teachers and are engaged in processes which focus on classroom learning improve their own learning at the same time they improve student learning, and teachers' growth strengthens their ability and resiliency in ways that help them to continue in the profession (LaFee, 2003)

Different models in the network literature can be applied to processes such as the NBPTS diffusion of innovations and educational attainment "as well as the more typical processes of crowd behavior and social movements" (Granovetter, 1978, p. 1421). Perpetuation theory was used in this study to examine relationships or ties within a networking context to examine social change. Weak ties indicate that individual teachers are open to new ideas and willing to grow and develop their practice in order to improve student learning. This means that whatever is to be diffused can reach a larger number of people and traverse greater social distance when passed through weak ties (Granovetter, 1973). Social relations are important in network analysis where teachers in schools can receive social support for their practices and feel pressure to change for the better when student learning is important. (Granovetter, 1995).

The information and opportunities that come to teachers through *weak ties* can make a difference in teacher practice. Dorris spoke about the importance for teachers to be willing to change in order to take advantage of the opportunities to learn. Sometimes it is not easy to hear critical remarks from other teachers, but student learning is too important for teachers to allow ego to get in the way.

The context of support networks to both constrain and enable. The significance

for studying the networks described by participants is not only that this study informs the

audience's understanding of the NBCTs perceptions of the process as a catalyst for

professional development, but that it furthers the understanding of the *context* participants

work in. The context for professional development for National Board Certified Teachers

which is the systemic consideration of practice in a collaborative relationship with other

educators was useful when considering a change in teaching practice. How did the

network and its *weak ties* contribute to the National Board Certified Teachers'

development and change in teaching practice? In what ways do participants continue to

develop and improve their practice? The participants' change in practice at times was a

real epiphany, but for the most part it was perceived by the participants as a continuing

process that was influenced by the network whose weak ties brought innovative

information to the teachers who were involved.

In order to help teachers grow professionally, leaders need to use powerful

professional development processes such as inquiry that can be adapted to unique

settings. Guskey (1995, 2000) and Sparks (1995, 2000, 2002) proclaim *context* as the key

to understanding powerful professional development. Context is defined by DuFour

(2001) as "the programs, procedures, beliefs, expectations and habits that constitute the

norm for a given school—that plays the largest role in determining whether professional

development efforts will have an impact on that school" (p. 14). In much of the research

represented in the dichotomies presented in Chapter II researchers made an effort to

eliminate the effects of context and in doing so they failed to address a critical issue; the

uniqueness of the individual setting. Guskey (2000) remarks that what works best in one

situation may not work well in another. I join DuFour (2001), Guskey (2000), Hilliard

(1997) and Sparks (2002) in arguing that while some general principles for powerful

professional development may apply from school to school, most principles and

processes need to be adapted to the unique characteristics of the particular school and

district setting. Educational contexts are complex and diverse, and this combination

makes it virtually impossible for researchers to establish universal truths for powerful

professional development without recognizing the importance of context (Guskey, 1993;

Huberman, 1983, 1985). As a result of conducting this study I also argue that a

professional network such as the NBPTS or NCTM can set up a context for growth for

individuals who participate, even if the school or district they teach in does not.

Barriers to continuing contact with group members. Perpetuation theory assists

in understanding the enculturation of members into particular groups or group settings

when using Granovetter's (1973) strong and weak ties. Members who have comparable

backgrounds, beliefs, and practices were likely to form strong ties within a particular

group or subgroup, and conversely members who had disparate background, beliefs, and

practices developed *weak ties*. The *strong ties* are the barriers to change, learning and

innovation. Three of the expressed barriers to participating in the NBPTS process were

the sub themes of stress caused by the demands of the process, the possibility of failure

and the amount of time away from family. In addition

In the *threshold* model of collective behavior two possible choices are considered

"where an actor has two distinct and mutually exclusive behavioral alternatives"

(Granovetter, 1978, p. 1422). The *threshold* is the point where the individual perceives

that the benefits to participation in a particular thing outweigh the costs (Granovetter,

1978). Granovetter uses participation in a riot as an analogy for interpreting the threshold

where a person would decide that involvement in the riot was of more benefit than the cost of taking part.

The decision for participants in this study to participate in NBPTS was socially influenced by networks of people within their experience. Although time away from family was a disadvantage, the participants were supported by their families to meet the demands of the process. The participants' concern about what other people would think if they did not successfully complete the process or if one of their friends did not achieve the certification and they did was stressful, but it was not a deterent to volunteering to participate. The extreme challenge of participating in the process was demanding, but not a high enough demand to change the particpants' minds. Therefore the possible *strong ties* of family and friends or other acquaintances who might think less of the particpants if they spent a great deal of time away from them or if they failed to achieve certification, did not hold them back from participation in the process for National Board Certification. *Strong ties* were not strong enough to keep the participants from voluntarily participating in the National Board Certification process.

Findings Which Do Not Support the Theoretical Framework

In many ways the findings in this study support the application of perpetuation theory and network analysis to other educational settings. Viewing the National Board Certified Teachers through this lens, however, reveals ways that the application of the theory may be extended. Distinctions that participants made that were not addressed by the theories were:

1) a social versus a professional network

2) ways diverse groups can work together productively

3) an individual's inner drive or commitment to personal professional development.

Social versus professional network. Perpetuation theory and network analysis in the work of Granovetter (1973, 1976, 1986) or Wells and Crain (1995) or Emirbayer and Goodwin (1994) make no distinction between a social and professional network. In applying perpetuation theory and network analysis to this study I noticed that all of the structures in the theories for the strong and weak ties were categorized as social structures. However, in this study the NBPTS participants made a distinction between personal or *social networks* and *professional networks*. Dorris, Peggy, and Jane made a distinction in the language they used to describe their growth, and Dan made the distinction through his discussion of the ways he networked with his colleagues. The elementary participants, Dorris, Peggy, and Jane networked for professional growth with other teachers in their school and district in addition to the greater network on the state, region, and national level. Dan, on the other hand, networked with colleagues in his school socially, talking about sports and family, but his professional network for discussions about math instruction and curriculum development were with his colleagues on a state regional and national level through NCTM. To add this distinction, the difference between a social and professional network, might increase the understanding of the context in schools. Dan's social contacts with the teachers in his school were not part of his professional network who discussed math instruction improvement. Bolman and Deal (1994) talk about moving teachers from isolation to collaboration and their reference to isolation appears to refer to the professional isolation of teachers, rather than the social isolation. Dan offers evidence that social networks can exist within schools where professional networks are practically nonexistent.

Ways diverse groups can work together. The theoretical framework for this study does not address ways in which groups can work together collaboratively to continuously nurture the professional development of teachers. The participants in this study bring to light a possible explanation for professional networks not existing within some schools; networks are difficult to maintain even if administrators believe them to be a good idea. Social networks can exist in schools and districts without administrative support and without administrators creating a context that supports professional development, however, professional networks are more dependent upon administrators actively creating and nurturing a context for professional growth.

Collaboration and networking with other teachers is not without its problems. Sometimes teachers do not do their part in presenting lessons. This causes a headache for other teachers who were counting on them to be ready with their part of the lesson, and when students are the participants in the lesson a lack of preparation lets them down as well. Peggy, however, is committed to networking and the feedback she gets from her colleagues. For Peggy teaching and student learning is too important to do in isolation. She comments that it is a time consuming kind of thing, but that the rewards are really worth it for her and for the students. Peggy knows the value of the network so she will do whatever she needs to do to keep the network going, and Peggy is a teacher leader who is also supported in the professional network concept by a central office administrator.

Even with support and commitment to the concept of collaboration with colleagues for better student learning, professional networks need the support of training and instruction in the processes of professional development to enhance the network's usefulness. When the distinction is made between professional and social networks in network analysis, it would be useful to expand the theory to accommodate professional

development in collaborative processes for those involved to help teachers within the professional network to be productive. This networking would be purposeful and focused on improving the achievement, motivation and engagement.

An individual's inner drive or commitment to professional learning. Within the relational aspect of network analysis, and I have argued for the importance of the relational approach versus the attribute driven approach, there is a need to understand more about the inner drive and commitment to professional learning that the four participants displayed. Often in spite of the context they were in, the participants were driven to learn more at a university, at professional organizational conferences, and at other professional trainings. The participants verbalized a need to participate in the National Board Certification process not only to see if the NBPTS process was a valid learning process for teachers, but to check out their own practice and find out if they could be successful in matching their practice to the NBPTS standards. Network analysis and perpetuation theory do not address characteristics of individuals or categories of behavior that might be used to explain, explore and understand what drives some teachers to pursue their own professional development.

As has been stated earlier, network theory builds its explanation for human behavior from patterns of relationships and the relationship of individuals to groups as well as the relationships between groups. Perpetuation theory and network analysis direct attention to network ties while suppressing the consideration of their substantive content. Network theory follows the point of departure Emirbayer and Goodwin (1994) called the *anticategorical imperative.* Whether the researcher is focusing on the behavior of an individual or a group, the *anticategorical imperative* rejects all attempts to explain human behavior *exclusively* in terms of the categorical attributes of actors. (Emirbayer &

Goodwin, 1994). My research is in agreement with this premise; however, without a checklist of qualities of effective teachers, I am limited in explaining this *inner drive* that surfaced in the narrative from the transcribed interviews.

Perhaps defining attributes for teachers is not without merit. It is difficult for this researcher to acknowledge that Stronge's (2002) teacher skills and assessment checklists could be useful to those who work in teacher preparation and development. A checklist of attributes for accomplished teachers could be valuable when looking at the teacher as a person. When discussing important skills a teacher should possess and develop, perhaps a checklist could be used when carefully coach a novice teacher to encourage their development toward professional mastery. But as Goodlad (1990) reminds us, the danger in focusing on the technical aspects of education such as teacher checklists and student scores on state tests is that educators will lose sight of the substantive or moral dimensions of teaching. It appears that for educators there is a tension between the limitation and the utility of defining the role of the teacher through a checklist of attributes or qualities of people who are in teaching positions.

The greatest inadequacies I found for network analysis and perpetuation theory is their failure to provide an explanation for the *inner drive* that was brought to light by the participants in this study. This insufficiency concurs with other critics' explanation of the shortcomings of the theory. Emirbayer and Goodwin (1994) argue that despite network analysis':

> powerful conceptualization of social structure, network analysis as it has been
>
> developed to date has inadequately theorized the causal role of ideals, beliefs,
>
> and values, and of the actors that strive to realize them; as a result, it has

neglected the cultural and symbolic moment in the very determination of social

action. (p. 1446)

In other words the inner drive the participants displayed in seeking professional

knowledge and experiences for professional growth falls into the realm of the causal role

of ideals, beliefs and values that *drives* their actions, and has not up to this time been

adequately addressed by these theories.

<div align="center">Conclusions</div>

The findings in this study led to the following conclusions: 1) the network of the

NBPTS process offers powerful professional development that is perpetual for teachers

who continue to be involved in a network, 2) weak ties within networks offer another

context for professional growth that may be juxtapositioned to the lack of support for an

individual's professional development within a school or district, 3) female teachers on

the elementary level are more likely to network with teachers in their building than a

male secondary teacher, 4) weak ties as described by perpetuation theory and network

analysis offer an effective lens for explaining teachers perspectives about their own

professional growth.

Each of the participants in this study gave evidence that the network of the

NBPTS process offers powerful professional development that is perpetual for teachers

who continue to be involved in a professional network. Networks such as NBPTS and

NCTM offer a bridge between scientifically based theoretical approaches and effective

instructional methods. The increasing demand for teacher accountability for student

learning through high stakes testing increases the need to move research into practice.

The implementation and evaluation of scientifically based interventions and strategies are

necessary. Within the moral dimensions of teaching as defined by Goodlad (1990), this

study validates powerful professional development through networks of professionals who are focused on increasing student engagement, motivation and achievement as an answer to the challenge presented by the accountability demand prevalent in the United States at this time. However, powerful professional development as demonstrated by the participants in this study challenges traditional views of professional development. This research study spotlights the key element of weak ties, the connections through which ideas and information flow, in a network of professionals as an important part of professional development for teachers.

The importance of context for teachers' professional growth has previously focused on the school and district context (Guskey, 2000). This study offers evidence from a secondary teacher that weak ties within professional networks offer another context for professional growth in juxtaposition to the lack of support for an individual's professional development within a school or district. The idea of changing a school or district culture into that of a learning community as DuFour (1998) recommends remains a worthy goal. The drawback of this goal is that changing the culture of schools and districts is generally a slow process that can take years to accomplish in the best of circumstances. One of the reasons the restructuring movement for school improvement has often failed is that it is difficult to maintain the momentum for change through changes in personnel until the culture and climate within a school and district can become the kind of environment that promotes perpetual professional growth and learning. The NBPTS and other professional organizations such as NCTM offer teachers a contextual network for powerful professional development that is perpetual for the teacher leaders who involve themselves in the networks, even if the context of their school or district does not support their professional development. Within schools and districts that support

teachers' professional growth, a professional network such as NCTM offers additional support for the increasing challenges teachers face.

In this study female teachers in elementary settings were more likely to network with school colleagues than was a male secondary teacher. The female elementary teachers either found or formed study groups while they were preparing their portfolio as part of the NBPTS process, and they continue to network, now three and four years after participating in the process, as leaders through programs which connect directly to the NBPTS. The secondary male teacher did not network with other teachers in his school or district while he was preparing his portfolio in the NBPTS process, but he continuously networked with other math teachers through NCTM before, during, and now after his successful completion of National Board Certification. It would appear that male secondary teachers may successfully complete the NBPTS process without a local network, while female elementary teachers believe the network to be a vital part of their success for the National Board Certification process.

Weak ties as described by perpetuation theory and network analysis offer an effective lens for explaining teachers' perspectives about their own professional growth. The weak ties through which teachers perpetually collaborate, use inquiry, dialogue and reflect on effective practice with colleagues are powerful means for professional development for teachers. Each of the teachers in this study is continuing in the processes of networking with other professionals to improve their teaching practice and student engagement, motivation, and achievement. The elementary teachers network with teachers in their school, district, state and region to improve student learning as they scaffold other teachers toward the goal of National Board Certification. Although the secondary teacher continues to network with other teachers in his state, region and

district, he still does not network with teachers in his school or district to discuss student performance or achievement. This study found the lenses of perpetuation theory, network analysis and the concept of weak ties useful in explaining the perceptions of NBPTS teachers' experience in the powerful professional development of the National Board Certification process.

<center>Study Implications</center>

The implications for theory, research and practice are explored in this section. In this study the application of perpetuation theory and network analysis to a network of National Board Certified teachers within the teaching profession extends the theory. The network of NBPTS professionals constitutes a context for professional development, which widens professional development research. In practice the network of NBPTS teachers, and the professional growth and development which they access through networks, is at odds with traditional approaches to professional development.

Theory

Perpetuation theory and network analysis as they are used in this study have roots in *structuralist inquiry* and *social constructionism* (Emirbayer & Goodwin, 1994). The emphasis within these theories is placed on relations and the information and innovation that those relations or *weak ties*, have on personal growth and the spread of programs or movements. These theories have primarily been applied to research with minority students in high school settings to explain the perpetuation of racial segregation. Emirbayer and Goodwin (1994) argue for *weak ties* to researchers in a wide range of fields in order to improve the dialogue and understanding among network analysts across areas of research. This study contributes to the theory by extending the application of perpetuation theory and network analysis to the teaching profession. National Board

Certified Teachers constitute a network of professionals and such a network challenges traditional views of professional development. The importance of networks, relationships and processes in explaining the continuing professional development of National Board Certified Teachers contributes unique information to professional development research by taking a unique look at contexts for teacher growth.

The results of this study extend and support network analysis and perpetuation theory by including a group of professionals that might not ordinarily be included within research related to these theories. The participants see themselves connected to professional networks that contribute to their professional growth and development, and although working with other teachers is difficult, they prefer not to teach alone. They are involved in processes where they continuously reflect, inquire, dialogue and collaborate with other professionals who are focused on student learning. Even when they find themselves in a context that does not support their continuing professional growth they find a network of professionals that nurtures them, because through all the challenges they face they believe that student achievement, engagement and motivation is of the utmost importance.

Research

There are many possibilities for further research which can be generated from this inquiry. Some opportunities are brought to light by the findings, and others are a result of the limitations of this study. For example, professional development research has historically ignored the importance of context in the belief that making the research more context-free would also make the research more *scientific*. Researchers such as Guskey (1995, 2000) who focus on effective school reform emphasize the importance of the school context for professional development. The encouragement this study has for those

who plan professional development for teachers is that school contexts that do not support teacher growth can often be overcome by networks of weak ties. The limitations of this study lie in its focus on exceptional teacher leaders, only one of whom was a high school teacher, who may not be representative of the majority of teachers who become National Board Certified.

In this study of National Board Certified Teachers the reform of their practice was influenced by the context and network of teachers in the NBPTS or NCTM or related organizational networks, sometimes in spite of the context of their schools. It might be important to do more in-depth research with high school National Board Certified Teachers, since their context is typically more isolated from other teachers within their schools. Further research could investigate high school teachers who are National Board Certified to see if Dan in this study is an anomaly or if other National Board Certified Teachers continue to use the powerful professional development processes of the NBPTS in their classroom practice.

The four teachers in this study are mature, master teachers who have assumed leadership roles in the profession, and all four teachers view NBPTS as an effective and important process within the teaching profession. Qualitative research with teachers who have not taken on a teacher leadership role before or during the NBPTS process could give a different picture of the effectiveness of the NBPTS process as a catalyst for powerful professional development.

This study focused on the teachers and their practice rather than the students or schools that the teachers worked in. This study could be expanded by including a look at student test scores of the teachers who were interviewed, although I do not believe that test scores *alone* are a worthy indication of the effectiveness of the NBPTS program,

several kinds of quantitative test data could have been added to this qualitative research. I could also have studied in depth the schools, school climate and general district context that the teachers work in to learn more about the ways they were nurtured or not nurtured as professionals within their school and district.

The students and parents of students in the National Board Certified Teachers' classes could be interviewed to get another perspective on how they view the teachers and their abilities. Another view of the NBCT's abilities could come from teachers in their schools who are and who are not National Board Certified Teachers, and from the administrators in their district. Since the participants are involved in national organizations, the other people in their networks on a state, regional or national level could be interviewed. These interviews could give a more rounded view of who the NBCTs see themselves to be and who different groups see them to be.

Research through further study of the process and network of the NBPTS might be a useful consideration for professors within colleges of education. The NBPTS process could be compared to the certification process for pre-service teachers in terms of learning and preparation for teaching. How does the process for National Board Certification differ from teacher certification processes within colleges of education? Could colleges of education better prepare teachers by a process which incorporates the rigor and relevancy of the NBPTS process? The portfolio processes for preservice teachers is similar to that for NBPTS certification in several ways already. For instance, the portfolios of teacher candidates in most states must address predetermined competencies in ways similar to the ways NBPTS candidates match their practice to NBPTS standards. Pre-service teachers collect artifacts from their experience and justify the inclusion of the particular artifacts under specific competencies through reflection.

Pre-service teachers tape record lessons, reflect on the lessons' effectiveness, and include this in the portfolio. Pre-service teachers give an oral presentation of their portfolio for a team of education professors within many universities to meet standards for graduation and eventually certification as teachers. After graduation pre-service teachers send the portfolios, especially electronic portfolios, to principals or human resource administrators who are considering the preservice teacher's employment within a particular school district. How could this process be strengthened by professional networks? In what ways might professional networks set up for pre-service teachers to continue through the early years of their teaching, support, sustain and nurture their growth, and would this improve teacher retention and effectiveness?

Practice

I believe that the findings of this study support the applicability of network analysis and perpetuation theory to the NBPTS process as powerful professional development for the teachers who have participated. The participants indicated that they were part of a network that supported their participation in the process and they expressed a belief that the NBPTS process was the best professional development that they had ever participated in because it was pragmatically tied to their practice. When teachers discussed their practice they included a description of the processes of reflection, dialogue, inquiry and collaboration with other teachers with a focus on student learning in their interview narrative. This led me to the conclusion that the participants were continuing to practice what they had learned through the NBPTS process.

Within this study, I believe that there are some applicable recommendations for practice which have emerged from the NBCTs shared perceptions about the process.

1. Teachers who successfully participate in the NBPTS process seldom do so in isolation from other candidates. Dan was the exception as a high school teacher who networked with a professional organization (NCTM) which provided other ways for networking with accomplished teachers who were focusing on improving instruction. The networking of the NBPTS teachers in this study contrasts sharply with the present day experience of many teachers in schools. Currently, most teachers are isolated from each other within schools contexts that discourage networking through rigid school schedules that do not allow time for networking within the day or week of teachers, the building's architectural plan that separates teachers by walls and halls, and the culture of the school and district that continues to promote traditional instruction (Sparks, 2002).

2. Just because teachers receive NBPTS certification does not mean that they feel confident about helping new candidates who are involved in the process. Often those who have successfully received certification do not know why they received the score they got on their portfolio entries. For this reason National Board Certified Teachers are afraid that they might give the wrong advice to a candidate. However, becoming an NBPTS assessor appears to increase the NBPTS teachers' confidence in being able to help NBPTS candidates understand what is expected. This should be a consideration for those who plan incentives in certain states and districts for NBPTS teachers who nurture other teacher candidates involved in the process. Perhaps the incentives should include payment for time assessing portfolios before teachers begin training. Presently teachers who assess portfolios are not paid

a small salary that does little more than cover the expense of travel and babysitting. The three elementary participants began assessing NBPTS portfolios to better understand ways they could coach and scaffold new candidates toward success. Other helpful training for NBPTS teachers who assist NBPTS candidates includes mentor and coaching training which is helpful because they feel more effective in using inquiry to assist candidates in reflecting on and analyzing their teaching and writing for their portfolio. This training might also be useful for mentor teachers who want to nurture the growth of new teachers or teachers in the profession who do not choose to go through the NBPTS process, but who want to improve their practice.

3. Email is an important way that NBPTS candidates and National Board Certified Teachers network to assist each other in professional growth. This raises a question for teachers who may not be NBPTS certified. How can email for teachers who have participated in professional development or who are focusing on improving student learning act as a network where teachers can continuously share ideas and help each other problem solve about student learning? Can such informal opportunities transform teacher practice as powerful professional development within a context of either email, chat rooms or other similar web based environments.

4. Teacher leadership is important to National Board Certified Teachers, because it gives them opportunities to continue to grow professionally within a network of teachers as they take advantage of university courses, and professional development that trains them to coach and mentor other teachers. This could also be true of teachers who seek further education, read

professional journals, and continuously prepare themselves through professional development to mentor and coach teachers. National Board Certified Teachers could also strengthen preservice teachers' experiences and preparation in relevant ways. At this point NBPTS incentives in states encourage teacher leadership in mentoring and coaching other teachers who are seeking NBPTS certification. What would be the effect of including NBPTS teachers in working with preservice teachers? Would the same mentoring and coaching strategies be useful for preservice teacher preparation?

5. The participants in this study believe that anyone who goes through the process must be willing to change their practice or curriculum or both in response to student need. Continuous professional learning might also be an important attribute within preservice teachers. This begs the question, how might preservice preparation programs promote a belief system within preservice teachers that encourages continuous professional learning and change in response to student need?

6. Two advantages of change in practice for those participating in the NBPTS process were verified as better student learning and less chance of burnout. Preventing teacher burnout through continuous professional learning has been encouraged by principals and superintendents such as Rick DuFour (2002), Mike Schmoker (2002) and others who act as administrators following a leadership model that promotes instructional leadership of mentor teachers within schools. NBPTS through its process of national certification could help to target mentor teachers who could encourage

continuous school reform that not only improves students learning, but improves teacher retention.

Teachers in this study believe that the National Board Certification process helped them to grow professionally more than any other single influence on their practice. Leadership opportunities that they have through NBPTS and other national organizations give teachers occasion to work with other teachers within a network where ideas and information flow back and forth. When participants believe they contribute ideas that help other teachers improve their practice, they are gratified by a belief that they have contributed significantly to the profession. As teachers continuously change their practice through reflection, dialogue, inquiry and collaboration, they renew their commitment to teaching. Each of the participants expressed a strong desire to continue networking to avoid the burnout they perceived might cause teachers to become ineffective or quit the profession.

Final Thoughts

In completing my dissertation I believe that I should be able to communicate some kind of personal growth. An epiphany for me was the realization that not only is a professional network an important part of an individual teacher's professional development but a profession is a group of people that aspires to go above and beyond minimal expectation. Previous standards for teachers and administrators were called minimum competencies and measured professional growth by a checklist of the minimal behaviors a teacher should have, and I now have a better sense of why this reductionist attitude should be unacceptable to our educational leaders. The transformation of teaching practice through networking with other teachers for growth as professionals is held against the current reality of teachers' professional isolation in a school. However,

just being together may or may not promote professional growth in teachers. Social time together with other teachers may not produce professional growth without effective powerful professional development processes and a supportive context. For example, as a teacher I sought ways to work with other teachers in my school to improve student learning. I studied my students' test scores for areas that I needed to improve my teaching, and met often with other teachers on my grade level to discuss different approaches and strategies that we could use, if I had known how to use the processes of inquiry, reflection, dialogue and collaboration, the time spent with other teachers would have been more productive, and my students' learning might have been further enhanced.

As a professional development director for my district I believed in the professional support that teachers can give each other. I even facilitated meetings for teachers who were going through the NBPTS process, but the things that I learned in this study surprised me. I have known a few teachers who were good writers and who went through the early years of the NBPTS process successfully, although they were in isolation from other candidates. How fortunate it is that current teacher candidates for NBPTS certification now have the benefit of the experience of other teachers. When I listened to the National Board Certified Teachers in this study talk about the importance of being with other teachers to talk about better teaching and learning I was amazed at their loyalty and commitment to the network.

I know that some teachers go through the NBPTS process only to get the stipend offered by their state or district and the recognition that it brings, but I know at least four teachers who continue to teach using the powerful professional development processes they learned as candidates. I also know that the teachers in this study are probably exceptional examples of accomplished teachers. Even though these NBCT's were

outstanding teachers before participating in the NBPTS process, I believe that they each

grew in surprising ways during and after their successful completion of National Board

Certification. As a result of this study I see the NBPTS as an important network

facilitator for teachers who want to become accomplished within the profession. I also

see NBPTS as building a professional networking context for teachers to grow

continuously within the profession, and I see NBPTS as an important part of building a

profession of teachers, one teacher at a time, but not in isolation.

If I could communicate one lesson to my colleagues it would be the *importance

of relationships* like the teachers in this study formed with other accomplished

professionals for the benefit of improving student learning. Teachers need to form

professional relationships with other teachers who promote their growth in the profession.

Students need teachers who realize the importance of connecting with their students and

helping them to learn. Teachers need administrators who are well-educated in

understanding the importance of relationships that promote professional growth and

student learning, and teachers need to be held accountable for the results of their teaching

(DuFour & Eaker, 1998).

More than anything teachers should understand the significance of a proactive

attitude about their own relationships with other teachers that focus on improving student

learning. Regardless of the lack of support for professional development within a school

or district, teachers who form or become a member of a networking context such as

NBPTS or other professional organizations will be able to find the weak ties through

which ideas and information flow, and they will be continuously renewed and supported

in ways that will not only improve practice, but will sustain them within the profession

when facing its challenges.

Margaret Wheatley (2002) speaks to me in ways I could not understand before this study:

> In organizations, real power and energy is generated through relationships. The patterns of relationships and the capacities to form them are more important than tasks, functions, roles and positions. (p. 63)

If university educators, national organizations, administrators and those who plan professional development are to prepare teachers and students for success in a world with an unpredictable future I believe it will be through relationships, the *weak ties* that keep educators strong by nurturing them with the knowledge, innovative ideas, and strategies they need to assist students in making meaningful connections with the curriculum.

This paper only scratches the surface of the complex and often indefinable process of powerful professional development in the National Board for Professional Teaching Standards. And yet each area that this article addresses has been the topic of numerous papers and research endeavors. Many of the factors discussed as critical to school change are supported by good empirical evidence (e.g., the role of the principal in promoting change, the importance of professional development, and teacher collaboration). Nevertheless, from the perspective of a former teacher, it seems clear that the interplay of all the various factors that instigate change remains little understood. Future research could profitably investigate questions that move in this direction such as the following that come immediately to mind. How do social upheavals like Columbine and 9-11 interact with the culture of schools to create enduring curricular and/or pedagogical changes? Do professional development opportunities offered to teachers reflect political agendas? And if so, in what ways are these agendas then translated into transformed practice?

Professional networks of teachers and administrators focused on student learning should be investigated further as we redefine the teaching context. Perhaps networks of professionals across schools, districts, states, regions, and nations offer the hope of professional growth that will strengthen teachers within the profession in ways that will ultimately change schools and bring true school reform. It has never been more important to prepare teachers for the challenges they face in classrooms; challenges of teaching such diverse populations of students within political climates that offer barriers rather than support, challenges of schedules that isolate teachers and inhibit the weak ties that strengthen them, challenges that threaten the purposeful intent of teachers who strive to prepare students for a changing world. In this study I found that the hope of meeting these challenges lies in weak ties between teachers who voluntarily join networks to survive and thrive, and I hope that others will continue the investigation of the strength of weak ties.

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APPENDIXES

APPENDIX A

INTERVIEW PROTOCOL

INTERVIEW PROTOCOL

My procedure:

A. I will introduce myself.

B. I will explain my research and ask if the interviewees have questions.

C. I will explain the consent form and obtain a signature.

The following focus questions will be asked:

1. Explain the process of NBPTS.

2. Why did you decide to participate in the NBPTS process and what did you learn?

3. What were some of your strengths as a teacher before you participated in the process for National Board Certification?

4. What are some of the advantages and disadvantages of participating in the NBPTS process?

5. What advice would you give to someone going through the NBPTS process, and why?

6. Who would agree with you and who might disagree?

7. Who helped you the most when you were going through the process, and who gives you support now?

8. Describe the greatest influence on your growth as a professional that you think helped you to improve learning in your classroom?

9. What is your next challenge?

10. What have I not asked you that I should have asked?

Additional probe questions are likely to develop from the interviews or the interview data. Given the processes of powerful professional development's dialog, inquiry, reflection and collaboration as well as the characteristics of ties (time, intimacy, intensity and reciprocity),

probes will seek information in these areas. Specific questions may include inquiries about professional development, networking, the NBPTS process, student learning and relationships with other NBCTs.

APPENDIX B

OVERVIEW

December, 2002

Dear Participant,

Thank you for agreeing to participate in my research study. The purpose of my study is to identify teachers' perceptions of the process for National Board Certification and it's influence on their practice. Powerful professional development supports teachers with the knowledge and experience they need to continuously grow and develop in ways that have a positive influence on student achievement.

Several teachers from both elementary and secondary ranks will be interviewed. The interviews will be audio taped and transcribed verbatim. Transcripts will be analyzed for major themes as they emerge. Confidentiality will be mantained. Names of participants in this study will not be identified. Only my dissertation advisor will have access to tapes and transcriptions. All data will be kept in a locked file and destroyed after two years.

Please read the attached Research Consent Form. I will contact you soon for an interview, and I will be happy to answer any questions you may have before or during our meeting.

Sincerely,

Jerita W. Whaley

405-743-0764

APPENDIX C

CONSENT FORM

AUTHORIZATION

I, _____, hereby authorize or direct Jerita Whaley, or associates or assistants of her choosing, to perform the following procedure.

B. DESCRIPTION

Project Title: *Powerful Professional Development: A Perpetuation Theory and Network Analysis of Teachers' Perceptions of the NBPTS Process*

The purpose of this qualitative study is to identify National Board Certified Teachers' perceptions of the process and its impact on their practice to better understand professional development. This study investigates NBPT's perception of changes in their practice through the lenses of powerful professional development, perpetuation theory and network analysis to explain the perspectives.

The procedure to be followed involves a semi-structured interview regarding the important features of professional development which might be helpful for leaders. Interviews will be taped and later transcribed. Interviews are expected to last about one hour. However, each person interviewed may determine the length of participation.

By agreeing to participate in this study, I understand:
1. the interview will be tape recorded and transcribed verbatim;
2. all data collected during the study will remain confidential;
3. access will be limited to the researcher and the dissertation advisor;
4. a follow-up interview may be requested to clarify information;
5. there is no foreseeable risk involved in this research study;
6. this study may help to identify characteristics of professional development which would help leaders plan professional development that supports teacher growth.

C. VOLUNTARY PARTICIPATION

I understand that participation is voluntary and that I will not be penalized if I choose not to participate. I also understand that I am free to withdraw my consent and end my participation in this project at any time after I notify the project director.

D. CONSENT DOCUMENTATION FOR WRITTEN INFORMED CONSENT

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: _____   Time: _____ (a.m./p.m.)

_____   _____

Name (typed)   Signature

I certify that I have personally explained all elements of this form to the subject before requesting the subject to sign it.

Signed: _____

Project Director

APPENDIX D

INSTITUTIONAL REVIEW BOARD

APPROVAL FORM

Oklahoma State University
Institutional Review Board

Protocol Expires: 12/16/2003

Date: Tuesday, December 17, 2002   IRB Application No   ED0331

Proposal Title: POWERFUL PROFESSIONAL DEVELOPEMNT: A PERPETUATION THEORY AND
                  NETWORK ANALYSIS OF TEACHERS' PERCEPTIONS OF THE NBPTS PROCESS

Principal
Investigator(s)

Jerita Whaley
2719 N. Crescent
Stillwater, OK 74075

Reviewed and
Processed as: Exempt

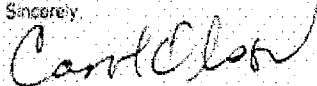Approval Status Recommended by Reviewer(s) Approved

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Dear PI:

Your IRB application referenced above has been approved for one calendar year. Please make note of
the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of
individuals who may be asked to participate in this study will be respected, and that the research will be
conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol
    must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar
    year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are
    unanticipated and impact the subjects during the course of this research, and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the
IRB procedures or need any assistance from the Board, please contact Sharon Bacher, the Executive
Secretary to the IRB, in 415 Whitehurst (phone: 405-744-5700, sbacher@okstate.edu)

Sincerely,

Carol Olson, Chair
Institutional Review Board

VITA

Jerita W. Southern Whaley

Candidate for the Degree of

Doctor of Education

Thesis: POWERFUL PROFESSIONAL DEVELOPMENT: A PERPETUATION THEORY
AND NETWORK ANALYSIS OF TEACHERS' PERCEPTIONS OF THE NATIONAL
BOARD FOR PROFESSIONAL TEACHING STANDARDS CERTIFICATION
PROCESS

Major: Eduational Administration

Biographical:

Personal Data: Born in Purcell, Oklahoma on June 8, 1948, the eldest child of Jerrell W.
and Vinita B. Southern. Married to Max Whaley since 1971 with two sons, one
daughter and one daughter-in-law

Education: Graduated from Carl Albert High School in Midwest City, Oklahoma in 1966;
received Bachelor of Science degree in Elementary Education from Oklahoma
Christian College in December, 1969; received Master of Science Degree in
Education with a major in Curriculum and Instruction from Oklahoma State
University in August, 1990. Completed the requirements for the Doctor of
Education degree with a major in Educational Administration in December, 2003

Experience: Employed as a fourth grade teacher 1970-71 at Barnes Elementary in
Midwest City, Oklahoma. Employed as a substitute in Stillwater Public Schools
in Oklahoma 1971-72. Employed teaching second grade at Will Rogers
Elementary in Stillwater Public Schools 1972-75. Taught pre-school 1976-1978.
Employed teaching kindergarten and third grade at Will Rogers Elementary in
Stillwater Public Schools 1979-1982. Employed teaching third grade at
Westwood Elementary in Stillwater Public Schools 1982-1992. Employed as the
Stillwter Professional Development Center Director, 1992-2003

Professional Memberships:
Association for Supervision of Curriculum Development, National Staff
Development Council, National Association of Elementary Principals, Oklahoma
Association of Elementary School Principals, Delta Kappa Gamma, Phi Kappa
Phi