

7-23-2013

# National Board Certified Teachers in Pennsylvania: A Study of Motivation and Persistence

Ronald Jay Starnes

*Indiana University of Pennsylvania*

Follow this and additional works at: <http://knowledge.library.iup.edu/etd>

---

## Recommended Citation

Starnes, Ronald Jay, "National Board Certified Teachers in Pennsylvania: A Study of Motivation and Persistence" (2013). *Theses and Dissertations (All)*. 602.

<http://knowledge.library.iup.edu/etd/602>

This Dissertation is brought to you for free and open access by Knowledge Repository @ IUP. It has been accepted for inclusion in Theses and Dissertations (All) by an authorized administrator of Knowledge Repository @ IUP. For more information, please contact [cclouser@iup.edu](mailto:cclouser@iup.edu), [sara.parme@iup.edu](mailto:sara.parme@iup.edu).

NATIONAL BOARD CERTIFIED TEACHERS IN PENNSYLVANIA: A STUDY OF  
MOTIVATION AND PERSISTENCE

A Dissertation

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Education

Ronald Jay Starnes

Indiana University of Pennsylvania

May 2013

© 2013 Ronald Jay Starnes

All Rights Reserved

Indiana University of Pennsylvania  
School of Graduate Studies and Research  
Department of Professional Studies in Education

We hereby approve the dissertation of

Ronald Jay Starnes

Candidate for the degree of Doctor of Education

---

Robert Millward, Ph.D., Co-Chair  
Professor of Professional Studies in Education

---

Alison Rutter, Ed.D., Co-Chair  
Associate Professor of Early Childhood &  
Elementary Education

---

Douglas Lare, Ed.D.  
Professor of Professional Studies in Education

ACCEPTED

---

Timothy P. Mack, Ph.D.  
Dean  
School of Graduate Studies and Research

Title: National Board Certified Teachers in Pennsylvania: A Study of Motivation and Persistence

Author: Ronald Jay Starnes

Dissertation Co-Chairs: Dr. Alison Rutter  
Dr. Robert Millward

Dissertation Committee Member: Dr. Douglas Lare

This descriptive study identifies: 1) the factors which motivated Pennsylvania teachers to begin the certification process; 2) the factors of persistence which led teachers to successful achievement of National Board Certification and; 3) the personal transformation which took place in the process. Quantitative and qualitative methods were employed in the study. The study population was 497 teachers in Pennsylvania who successfully attained National Board Certification. The group was asked to complete a survey in which they rate factors that motivated them to pursue National Board Certification. The study included responses from 88 teachers. A sample group of 15 of the survey participants was randomly selected to be interviewed by the researcher to gain an understanding of the factors which lead a candidate to persist to successful attainment of National Board Certification. The study found that teachers in Pennsylvania were motivated to begin National Board Certification by professional improvement, financial incentives and validation of their teaching practice, with the strongest motivating factor being professional improvement. Mentoring and peer relationships were strong factors of persistence to complete the certification, as was an increased desire to grow professionally, indicating a shift from extrinsic to intrinsic motivating factors. Future research of National Board Certification related to the impacts of leadership on recruitment, mentoring programs verses independent completion of the certification process, and the impact of National Board Certification on student achievement are topics recommended for future study.

## TABLE OF CONTENTS

Chapter		Page
I	INTRODUCTION .....	1
	Background .....	3
	The Value of NBC .....	6
	Purpose of the Study .....	7
	Rationale for the Study .....	7
	Research Questions .....	8
	Research Methodology .....	8
	Definitions of Terms .....	9
	Delimitations of the Study .....	10
	Limitations of the Study.....	10
	Assumptions.....	11
	Summary .....	11
II	REVIEW OF THE LITERATURE.....	13
	Introduction.....	13
	Criteria for Selecting the Literature .....	13
	Improving Educational Systems .....	13
	Teacher Certification and Compensation.....	15
	National Board for Professional Teaching Standards .....	18
	Research on National Board Certification .....	20
	Support for NBPTS.....	21
	Criticism of NBPTS .....	25
	Signal of Accomplished Teaching or Creating Accomplished Teachers .....	27
	Teacher Professional Development .....	28
	National Board Certification Process.....	34
	Supports Necessary .....	38
	Motivation to Complete .....	40
	Incentives .....	44
	Obstacles to Completion .....	45
	NBC in Pennsylvania.....	46
	Summary .....	47
III	METHODOLOGY .....	49
	Quantitative Data .....	49
	Qualitative Data .....	49
	Introduction.....	50
	Overview of the study .....	51
	Purpose.....	51
	Research Questions .....	52
	Population .....	52
	Data Collection .....	53
	Identification of the Population .....	53
	The Survey .....	54

Chapter		Page
	Quantitative Data Analysis .....	59
	Qualitative Data Analysis .....	60
	Interviews.....	61
	Ethics and Confidentiality.....	62
	Summary .....	63
IV	DATA ANALYSIS .....	64
	Purpose.....	64
	Population .....	65
	Data Collection .....	66
	Quantitative Data Analysis .....	66
	Qualitative Data Collection.....	72
	Initial Motivational Factors.....	74
	Financial Incentive.....	74
	Validation, Prestige, Recognition .....	76
	Professional Improvement .....	77
	Perceived Impact on Teaching .....	79
	Factors of Persistence .....	84
	Mentoring.....	85
	Teamwork/Peers .....	86
	Structured Time .....	86
	Motivational Changes .....	87
	Factors of Persistence .....	87
	Stick-to-it-ness .....	88
	Moving from Financial Incentives.....	89
	Other Changes from Initial Motivation Factors.....	91
	Transformational Change.....	92
	Summary .....	93
V	CONCLUSIONS, SUMMARY, & RECOMMENDATIONS .....	96
	Summary of Results.....	97
	Professional Benefits on NBC .....	100
	Final Conclusions.....	101
	Transformational Process.....	101
	Relationships in NBC .....	104
	Mentoring.....	105
	Peers and Teams .....	107
	Implications for Practice .....	109
	NBC as Professional Development.....	110
	Compliance vs. Engagement.....	112
	NBC and Professional Development Costs .....	114
	Why not More NBCTs in PA.....	115
	Recruitment.....	116
	Recommendations for Future Study .....	117
	Summary .....	120

Chapter	Page
A Model of Professional Development.....	120
Conclusion .....	124
REFERENCES .....	125
APPENDICES .....	137
Appendix A - Incentives to NBC Candidates by State .....	137
Appendix B - State Rank of NBC Teachers .....	139
Appendix C - Twenty Five Highest States .....	140
Appendix D - Introduction Letter .....	141
Appendix E - Consent to Participate.....	142
Appendix F - Telephone Interview Question Form.....	144
Appendix G – Online Survey.....	145



## LIST OF TABLES

Table	Page
1 State Incentives to NBC candidates by top three highest population NBCT states and Pennsylvania.....	6
2 Meetings with representatives of the NBPTS, PDE, and directors of Pennsylvania Centers for teaching excellence.....	55
3 Pennsylvania National Board for Professional Teaching Standards Motivation Survey by Category.....	57
4 Frequencies and Percent Compositions for Survey Independent Variables.....	67
5 Intercorrelations Between Selected Study Survey Factors.....	69
6 Descriptive Statistics for Survey Dependent Variables.....	70
7 MANOVA Statistics for Analysis of Survey Dependent Variables.....	71
8 Themes which Emerged from Qualitative Data.....	74

## LIST OF FIGURES

Figures	Page
1 Pennsylvania NBCT Growth Rate compared to US NBCT Growth Rate for the years 2006, 2007, and 2008.....	5

## CHAPTER I

### INTRODUCTION

Teaching has become a complex profession requiring teachers to master curriculum content and new strategies, while being responsive to student's learning needs and school-wide initiatives (Danielson, 2011). Principals as instructional leaders need to be creative in helping teachers develop the skills to meet these demands. They also need to source new hires that can grow professionally into accomplished teachers who can collaborate and take on leadership roles. One attribute that teachers will need for these new tasks is to be reflective practitioners. In an age of standards based, common core curriculums and heavy dependence on standardized tests, reflective practice may be more important than ever.

School administrators use a variety of techniques to find the most qualified teachers to work in their schools. Job fairs, hosting student teachers, conducting interviews, observing sample lessons, viewing recorded segments of candidate's teaching, and posting advertisements are just a few methods to find teachers, but these methods are ineffective in identifying reflective professionals who will be able to handle the complex array of tasks for which they will be responsible. Teachers who are just entering the workforce typically have limited experience from which to draw as they market themselves in the workforce. Grades, recommendations, and portfolios give prospective employers a glimpse of a candidate's potential, but they are inconsistent and deficient in indicating one's true ability as a reflective decision maker. Experienced teachers may have an advantage in the job market in that they have an employment history in schools from which future employers can gain an understanding of their prior performance. However, teacher evaluations are not consistent from district to district and have typically been too general in nature to be effective screening tools. Finding accomplished

teachers to employ in a school is an inconsistent art, as is the process of evaluating the needs of one's own teachers.

Identifying these accomplished, reflective teachers among a school's faculty is not an easy task either. A teacher's years of service or accumulation of post graduate courses does not always translate to accomplished teaching. Teachers are typically compensated based on a salary schedule which offers movement on steps based in years of teaching experience and levels of education. More recent movements toward teacher accountability have spawned the use of merit based pay systems which reward teachers for increases in student performance or for some professional teaching accomplishment. These systems of compensation are based on extrinsic rewards for longevity, education or professional contribution. Deci's work (1995), *Why we do what we do; Understanding self-motivation*, suggests ways in which intrinsic motivation could be related to the job performance of teachers. This, in connection with Shon's theories of reflection-in-action (1983) which gives focus to professional improvement from the practice of self- reflection, has a history in professional improvement theory dating back to Dewey's theories of inquiry (1933). The connection of these theories directed this study toward the National Board for Professional Teaching Standards (NBPTS) and the organization's process of National Board Certification (NBC).

The NBPTS is an outgrowth of reforms that have responded to the demands of our nation's economy and industry. Educational systems and teaching have been identified as important aspects of our nation's prosperity over the course of our history. This fact is manifest in the numerous reports over the past 65 years which place education at the forefront of political debate in the country. Reforms since the mid 1900s leading to the publication of *A nation at risk* (1983), each had the impact of thrusting education and, more specifically teacher quality, into the

national political arena. And from *A Nation at Risk* (1983) came a call for America to improve its teaching ranks through the inception of national teaching standards.

### **Background**

The National Board for Professional Teaching Standards (NBPTS) was established in the aftermath of the publication of *A Nation at Risk* (1983). The publication was alarming and from it came an increased focus on the education of America's youth, a call for educational reform. The publication inspired a group of leaders in education, business and politics, the Carnegie Forum, to find a solution to the report's concerns. A solution to one component of the report was outlined in a May 16, 1987 Los Angeles Times article titled, *Carnegie Education Forum Plans National Board to Certify teachers*.

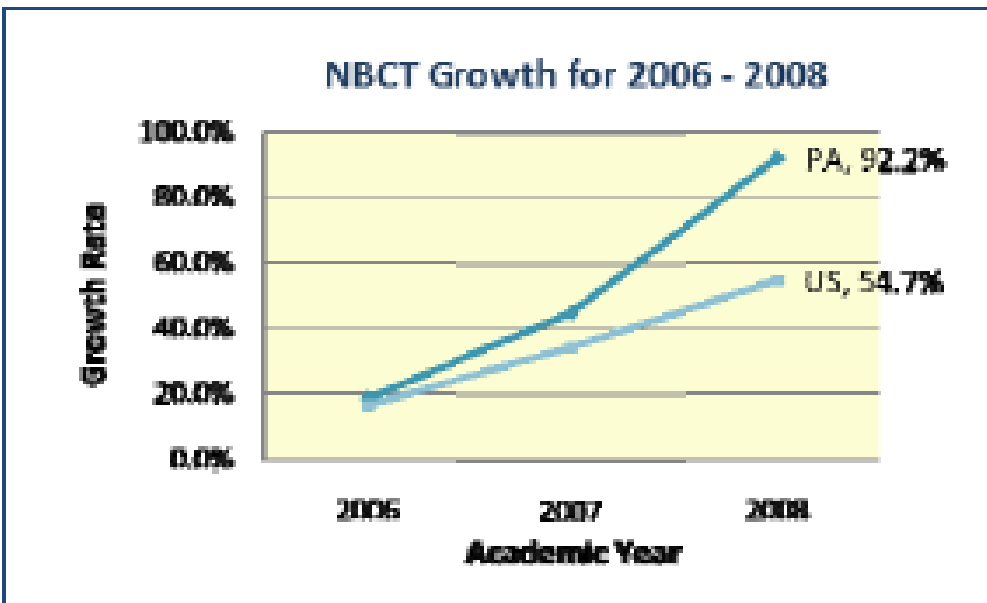
The Carnegie Forum on Education and the Economy announced Friday the establishment of a national board that will set standards and assess and certify the competence of teachers. The forum's announcement, made during its second annual meeting attended by teacher leaders, legislators and state and local education officials, came one year after its release of a provocative report that urged a radical overhaul of the teaching profession. This new organization's (the NBPTS) foundational mission was to encourage teachers to be part of the educational reform process (Ross, 2006). Since the inception of NBPTS, nearly 91,000 teachers have successfully completed the rigorous application process and attained National Board Certification (NBPTS, 2011). There have been mixed reviews to its success. The National Board cites research indicating the certification has a positive impact on teaching, learning and student achievement (Cavaluzzo, 2004; Vendevoort, 2004; Goldhaber; 2004, Sanders, 2005; Smith, 2005; Smith 2000), improving teacher practice (Dagenhart, 2002; Petty, 2002; Ralph, 2003; Bond, 2000; Lustck, 2006; Whitman, 2002), and is an effective method of

professional development (Lustick, 2006; Cohen, 2005). However, not everyone agrees that National Board Certification is a good investment for improving our nation's teachers. Some critics of National Board Certification (NBC) believe it is an "insider's organization" (Goldhaber, 2007), others argue that there is little difference in teacher quality between National Board Certified Teachers (NBCTs) and non-NBCTs (Sanders, 2005), as well they cite little difference in achievement between students of NBCTs and non-NBCTs (Sanders, 2005; McCloskey, 2005). This research, and additional research, is more thoroughly reviewed in chapter two of the study.

Compared to the percentage of NBCTs in the US (2.5%) the country's population of teachers (3.6 million) only .85% of Pennsylvania's teachers have achieved certification. Pennsylvania ranks 20<sup>th</sup> within the country for raw numbers of teachers, leading those interested in attracting accomplished teachers to the Commonwealth to wonder why the state is so low in the rankings (Appendix 1). Other states such as North Carolina and South Carolina boast the highest percentages of NBCTs relative to the total population of teachers in their states with 18.71% and 13.26% respectively. However, recent trends in Pennsylvania show increased numbers of teachers who are becoming NBCTs (Figure 1).

Figure 1

*Pennsylvania NBCT Growth Rate compared to US NBCT Growth Rate for the years 2006, 2007, and 2008.*



Pennsylvania had almost a 20% increase in successful candidates from 2009 to 2010 (NBPTS, 2011). To those who believe that NBC has a positive impact on teaching this is an encouraging trend (W. Jordan-Davis, personal communication, September 21, 2008). Despite the recent increases, experts in the field of national board certification are concerned with the small percentage of NBCTs in Pennsylvania relative to the percentage of NBCTs nationally and encourage research in this area. Research specific to Pennsylvania teachers will help identify ways teachers can be recruited and supported.

Some believe that the inconsistency in percentages of NBCTs across the country may be tied to financial incentives for new NBCTs. Many states offer incentives to teachers who attain National Board Certification (NBC). For a full list of incentives refer to Appendix A. This attachment as well as Table 1 illustrate that state incentive programs offered in 2010 represent a large financial investment in teachers who attain NBC. Table 1 reflects state financed initiatives

of the states having the three highest numbers of NBCTs. Pennsylvania has been added to the list for comparison. States which offered financial incentives, North Carolina, South Carolina and Florida have larger percentages of NBCTs than do other states, i.e. Pennsylvania, which offer no state wide financial incentive for teachers to attain the credential. Many states, including Pennsylvania, have had incentives from local school districts for teachers who have successfully completed the certification requirements.

Table 1

*State Incentives to NBC candidates by top three highest population NBCT states and Pennsylvania.*

<b>State</b>	<b>Fee Incentive</b>	<b>Salary Incentive</b>	<b>Other Incentive</b>
North Carolina	\$2,500	12% salary increase	3 days of release time
South Carolina	100% loan forgivable upon successful completion or those in low performing schools	\$7500/yr	NA
Florida	NA	10% bonus	10% bonus for mentors
Pennsylvania	\$1,250	NA	NA

### **The Value of NBC**

As part of the pilot for this study, interviews were conducted with Pennsylvania teachers who completed the certification process. They support the positive contribution of NBC and provide anecdotal testimony about the impact of the NBC process on teachers. David Taylor, a 16 year teacher of middle school math said, “The process itself was valuable as I learned about myself as an educator.” David also cites an increased ability to identify the needs of his students. A 24 year teacher named Edward Roppelt said, “It was the best professional development of my career.” The responses of those teachers interviewed are echoed in the literature by NBCTs from



other states. Diana Russell, an English teacher at Yorktown High School in Arlington County, Virginia, made the decision to attempt National Board Certification after 30 years of teaching. Her interest was motivated by watching many of her students struggle, receiving C's and D's, she wanted to learn how to help them. She reports that it was the most difficult and most rewarding year of her career (NBPTS, 2009). The positive impact of NBC reflected in the literature body, reviewed in chapter 2, personal testimonies of positive experiences, the enthusiasm and vigor for the national board process observed by the researcher beg the question of why more teachers in Pennsylvania are not pursuing the certification. This dissertation is written in response to the limited body in this area, specifically relative to Pennsylvania's what factors led teachers to successfully complete the National Board Certification.

### **Purpose of the Study**

The purpose of this study was to identify what motivated teachers in Pennsylvania to become involved in the NBC process with the interest in encouraging accomplished teaching. Identifying the motivational factors evident in successful teachers would prove beneficial in attracting new candidates to take part in the process. Beyond the initial motivation of teachers to start the process, the study sought to find factors which led the teachers to successful completion of the certification. Identifying the motivating factors which led teachers in Pennsylvania to complete the NBC process, and the factors of persistence which were necessary to lead to the successful certification was the purpose of this study. The perceived impact of NBC on teacher's instructional practice per the goals of the NBPTS was also examined.

### **Rationale for the Study**

Many aspects of the NBC process have been recognized as positively impacting teachers and educational systems (Soonhye, 2007; Stokes, 2007). The reflective practice of the

certification portfolio (Stronge, 2002), the relationships fostered through the mentoring process (Freund, 2005), and the application of teaching standards (Campbell, 2001) to one's own practice are generally accepted as positive aspects of the certification. If the NBC process is generally accepted as having a positive impact on education then more teachers applying for, and successfully completing, the certification in Pennsylvania will have a positive impact on transforming schools. Nearly 500 teachers have persisted to successfully obtain National Board Certification in Pennsylvania. Identifying those factors which motivated teachers in Pennsylvania to successfully complete the rigorous certification process may be helpful in identifying and recruiting accomplished teachers, as well as, supporting them through the rigorous process.

### **Research Questions**

1. What motivated Pennsylvania teachers to engage in the National Board Certification process?  
  
Independent variables such as a financial incentive, recognition, leadership, and professional improvement will be analyzed.
2. What factors led teachers to persist to successful completion of the National Board Certification process?
3. What is the perceived impact of National Board Certification on teaching?

### **Research Methodology**

The study will focus on assessing the impact of the factors which motivated teachers in Pennsylvania to engage in and to persist to successful completion of the National Board Certification process. These factors were derived from quantitative and qualitative measures

embedded in an online survey and researcher interviews with successful completers of NBC in Pennsylvania. A complete description of the research methodology ensues in chapter three.

### **Definition of Terms**

- **Accomplished Teacher-** According to the NBPTS, an accomplished teacher is one who is qualified to equip students with the skills they need to succeed in the 21<sup>st</sup> century, global community (2013). Accomplished teachers know and are able to evidence the Five Core Propositions of the organization.
- **Five Core Propositions of NBPTS-** The basic principles of the organization and the measure of what the organization calls, “accomplished teaching.” The core propositions are; 1. Teachers are committed to students and their learning. 2. Teachers know the subjects they teach and how to teach those subjects to children. 3. Teachers are responsible for managing and monitoring student learning. 4. Teachers think systematically about their practice and learn from experience. 5. Teachers are members of learning communities.
- **National Board Certification (NBC)-** The certification issued to teachers who successfully complete the requirements of the National Board for Professional Teaching Standards.
- **National Board Certified Teacher (NBCT)-** A teacher who has attained National Board Certification.
- **National Board for Professional Teaching Standards (NBPTS)-** Defined by the National Board (2008): NBPTS is an independent, nonprofit and nonpartisan organization founded in 1987 to create a system of certification for teachers based on high and rigorous standards. The purpose of the organization is advance the quality of teaching and

learning by developing professional standards for accomplished teaching, creating a voluntary system to certify teachers who meet those standards and integrating certified teachers into educational reform efforts (p. 3).

- Portfolio- A purposeful collection of work for analysis and reflection (Tucker, 2002).  
The NBPTS portfolio of classroom practice consists of four entries: One classroom-based entry with accompanying student work, two classroom-based entries that require video recordings of interactions between you and your students, one documented accomplishments entry that provides evidence of your accomplishments outside of the classroom and how that work impacts student learning, each entry requires direct evidence of teaching or school counseling as well as a commentary describing, analyzing, and reflecting on this evidence (NBPTS, 2011).
- Professional Development- ongoing learning opportunities for teachers.
- Reflective Practice – careful review of and thoughtfulness about one’s own teaching process (Stronge, 2002).

### **Delimitations of the Study**

- The study is intentionally narrow in focus. The sample group of 496 NBCTs in Pennsylvania who have successfully completed the National Board Certification process by the National Board for Professional Teaching Standards in Pennsylvania.
- The participants in the study are, or were, teachers in K-12 grades in Pennsylvania school systems.

### **Limitations of the Study**

- Survey responses and open-ended interview questions in the study form a collection of data in one time period forming a single, stand-alone descriptive study. This narrow

window of time may not produce data which provides a breadth of perspective to be generalized universally.

- Participants in the study were successful completers and volunteered information. Their views and opinions may be biased based on experiences and involvements with the NBPTS, thus may not be valid motivating factors for candidates with no experiences or involvement with NBPTS.

### **Assumptions**

- Although there are critics of the research about the NBPTS, for the purpose of this study it is assumed that the NBC process has an overall positive influence on teachers, student achievement and educational systems.
- It is assumed that teachers who completed the NBPTS certification were motivated by some factor/s and will be willing to truthfully share their perceptions about what factor/s motivated them to complete the process.

### **Summary**

Rooted in theory from Shon (1983) and Dewey (1933), reflective practice is a way for a teacher to improve his professional practice. National Board Certification through the National Board for Professional Teaching Standards is a highly reflective process of examining one's teaching practice. Many states have larger percentages of National Board Certified Teachers than Pennsylvania. Some researchers suggest that the disproportionate numbers of NBCTs in some states relative to the overall teaching force is based on extrinsic motivational incentives like salary increases. The NBC process has characteristics which are associated with intrinsic motivational factors like the relationships built with mentors, and an internal desire to improve professionally. Examining the initial motivational factors of successful NBCTs and the factors

which led them to persist to successful completion will add research explaining the relationship between extrinsic motivation, intrinsic motivation and reflective practice as it relates to National Board Certification. The study will further explore the perceptions which NBCTs have about the impact of the process on their teaching.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### **Introduction**

The purpose of this study is to examine the motivating factors which were present in teachers at the beginning of their work toward National Board Certification. The study further explores the factors of persistence which sustained teachers as they met obstacles along the National Board Certification process. Lastly, it examines the perceptions some successful National Board Certified Teachers have about the impact of the certification on their teaching. This chapter reviews the literature relevant to topics associated with successful National Board Certification.

#### **Criteria for Selecting the Literature**

Literature for this review was selected based on its relevance to the topics of National Board for Professional Teaching Standards, National Board Certified teachers, teacher professional development and human motivation. Journal articles, books, research studies, reports and electronic sources were selected as a literature base for the study. The authors of the literature are considered experts in the field of reflective practice, NBPTS, National Board Certification as educational reform, and human motivation.

#### **Improving Educational Systems**

The rigors of a technological economy have created new demands on our educational systems and have changed the nature of education. Student achievement is more than the mere regurgitation of facts on a test, quiz or standardized exam. Preparing students to be active participants in a complex society means teaching them to think, problem solve, and communicate. Educational systems must connect high levels of rigor with real world relevance

(Daggett, 2008). This, coupled with new research on how the brain works, has resulted in a system that demands more complex learning that includes problem solving and knowledge application (Danielson, 2011). According to Sabelli (1999):

improving the nation's educational system is an iterative process of continuous improvement requiring the following conditions:

- (a) long-term research investments that evolve in their nature
- (b) parallel to other research situations, scholarly contributions to educational must involve an ongoing interplay between theory and experiment,
- (c) if the education system is to change, the role of practitioners in the processes of experimentation and adaptation must become paramount,
- (d) sustainable improvement depends on transferring the ownership of innovation from the scholarly community to practitioners and policy makers in the evolving educational system (1999).

These four conditions illustrate a change in teacher professional development practice from single event in-services to ongoing examination of professional practice focused on the application of educational theory.

Later in this chapter the parallels between the concepts described by Sabelli (1999) and National Board Certification are detailed. As an introduction to the relationship between educational theory and practice, the National Board for Professional Teaching Standards explained its Five Core Propositions in the publication of a policy statement called, *What teachers should know and be able to do* (1989). In this document the NBPTS connects theory and practice. These connections are more evident as the history, process and research about



NBC are presented in subsequent sections. One of these issues is the evolution of teacher certification and compensation as discussed in the next sections.

### **Teacher Certification and Compensation**

Teacher certification and compensation systems have changed and evolved at various times in the history of our country due to factors such as politics and the economy. For instance the organization, National Board for Professional Teaching Standards, and the process of National Board Certification were born from the political backlash of the publication of the report that scathed the educational systems in the country in a time of economic upheaval (*A Nation at Risk*, 1983). However, a national solution to educational problems is a difficult concept since for most of our nation's history as education is in the purview of the states, not the federal government. It is necessary to review the literature about teacher certification and compensation in order to better understand the factors which led to and continue to impact the implementation of NBC in the country, and specifically Pennsylvania.

Political and economic factors have had influences on the teacher certification process over the past century and a half. Leading teacher education historian, Angus, outlined the teacher certification evolution in his book, *Professionalism and the public good: A brief history of teacher certification* (2001). Teacher preparation and certification has kept a step ahead of the educational level of the populace. For instance, at the turn of the 20<sup>th</sup> century, a teacher candidate's minimal level of education was completion of a high school diploma program. At other times candidates came from the normal school experience where they were trained to become teachers after high school, recently, in some states, they needed to complete a master's degree program. Authority to certify teachers has been varied and inconsistent as well, from control in the form of certification exams measuring teacher's knowledge of content and

pedagogy, to county or local school boards and superintendents issuing certificates to candidates. Pennsylvania was the first state to specify tests in subject areas in 1834. By the early 1990's 50% of public school districts in the country required testing for teacher certification. Unions, education organizations, post-secondary educational institutions, federal, state and local governmental agencies have all played parts in the highly political arena of teacher certification (Angus, 2001). The Carnegie Forum's (1986) recommendations for a system of national teacher standards and a national certification differs from the historical precedent of state and local control of teacher certification. This may be one of the factors leading to disproportionate numbers of NBCTs state to state. NBC, like other education and experiential factors often impacts teacher compensation.

Just as requirements for teacher certification have increased over the years, so has teacher compensation. While they may not be directly linked, teacher compensation has been influenced by the overall political, social and economic climate. Three general forms of compensation have been prevalent over the last 200 years. The first was the boarding round system in which teachers were provided room and board for their services. This system was common in the 19<sup>th</sup> century. As certification requirements were raised in the 1900's, compensation for teachers increased as well. The position-based salary system was used to compensate teachers with greater levels of education, i.e. secondary teachers needed a higher level of education and were paid more based on their education and job requirements than were grammar school teachers. The system which began in the 20<sup>th</sup> century and the system commonly used today is the single-salary schedule which pays teachers based on their education level and years of experience (Odden, 2002). While there is some change towards a merit system by which teachers are paid for performance- their own and that of their students, these are not yet established as common

place. The complexities of teaching in the standards based era require much more of teachers than in previous eras (ECS, 2001) and current systems of compensation do not typically recognize and reward quality (Goorian, 2000). These variations in teacher certification and compensation can be related to the political and economic conditions at various times in our history.

Supply and demand of teachers has historically had an impact on the certification process (Angus, 2001). After WWII an influx in men and women once working in the war effort found themselves looking for jobs. They flooded the US labor market after the conclusion of the war and more people were available to be teachers. Today with the population and jobs migration away from the “rust belt”, there is a surplus of teachers in some areas and a shortage elsewhere. Supply and demand can be found within the occupation as well. For instance, in much of the north, elementary education positions are “surplussed” while special education, ESL, STEM positions are in demand. In other locations like California, state educational leaders estimate that a teacher shortage will reach 100,000 teachers in 2016 (Steadman, 2007). Nationally, the teacher shortage was approximately 32,000 teachers in the 2006-07 school year (Steadman, 2007). Compounding this problem is the fact that nearly 25% of new teachers leave the profession in their first two years and nearly 50% leave within their first 5 years (Steadman, 2007). These issues of supply and demand have an impact on certification and related compensation. If an over-supply, there is less a push for increased compensation and demand for more restricting certification requirements. This can have an impact on NBC.

As teacher certification and preparation is controlled by individual states, regulations controlling certification differ from state to state across the United States. For better or for worse, there is no national system for issuing teaching credentials. There has been an inability

for educational leaders to agree on or to establish a specific, uniform, measurable body of skills and knowledge which teachers should possess (Hess, 2003). Like the national standards movement, a move towards national certification had to be an outgrowth from educational leaders and the states, not from the federal government. National Board Certification offers an opportunity to define accomplished teaching across the different certification and compensation systems in the country. The discussion in the next sections describes the NBPTS and NBC, and research related to the organization and the certification.

### **National Board for Professional Teaching Standards**

In 1987 the National Board for Professional Teaching Standards was created in response to the findings associated with the report, *A Nation at Risk* (1983). The Commission on Excellence in Education report suggested fundamental changes to the curriculum of America's schools (1983). Additionally, it was suggested that a way to increase our nation's educational position in the world was to focus on teachers, teacher education, and education standards (Commission on Excellence in Education, 1983). The report also emphasized an increased importance on lifelong learning for all citizens (1983). *The Carnegie Forum: Teachers for the 21<sup>st</sup> Century* (1986) answered the call for educational reform by developing plans for wide range systemic change. The Forum advocated for teachers to be active leaders in the change process and redesign of schools (Carnegie Forum, 1986). From this effort, the National Board for Professional Teaching Standards (NBPTS) was established as an independent, nonprofit, nonpartisan, non-governmental organization governed by a board of directors. It was the organization's mandate to develop standards and to define proficient teaching in 27 content areas (Ross, 2006). The process of developing standards which reflect high-quality teaching and designing a measurement system to evaluate teachers based on those standards resulted in

National Board Certification (NBC) through the NBPTS. It was hoped that teacher leaders developed in the NBC process would become catalysts for changing school cultures and practices locally and that the profession of teaching would gain greater recognition and respect nationally (Goldhaber, 2003).

Arguments that 1) students in the US are falling behind students in other countries and 2) the perceived decline in the nation's global economic viability is due to this education gap, suggest the need for educational reform. Making changes in educational systems can be slow, challenging and expensive. The impact of previous changes in educational systems in the nation is difficult to measure and therefore difficult to evaluate for effectiveness. Some educational leaders propose that despite the education reforms proposed in the late 1980s like NBPTS, not much has changed in American education (Dagget, 2008). Billions of dollars have been spent to prepare teachers to be better practitioners. In an era of increased teacher accountability, with respect to the emphasis on student test scores and a seemingly failing economy, many point the finger of failure at educational systems and teachers. The past 20 years have produced nearly 91,000 National Board Certified teachers (NBPTS, 2010), yet research and support for national board certification are mixed. Investment in NBPTS from public and private sources include over \$600 million in grants and fees, upwards of \$8,000 per NBCT, as well as over \$1 billion in salary increases due to attainment of the credential (Podgursky, 2001). Two basic camps exist with regard to National Board for Professional Teaching Standards: those who support the National Board and those who are critical of the National Board. The next several sections will examine both positions.

### **Research on National Board Certification**

An increasing literature body relative to National Board candidates, NBCTs, and their professional practice gives a broad picture of the impact which National Board Certification is having on US schools. Various reports from studies of the effects of National Board Certification on pedagogy, teacher effectiveness and the assessment process show positive changes in student assessment (Lustick & Sykes; Sato, Wei, & Darling-Hammond, 2008), learning gains in science (Lustick & Sykes, 2006), and literacy instruction (Coskie & Place, 2008; Place & Coskie, 2006). Research has also shown how standards of the National Board have been used to assist teachers' work as leaders, facilitate discussions of curricular improvement and improved teaching practices among colleagues (Koppich, Humphrey & Hough, 2006; Sato, Hyler & Monte-Sano, 2002).

Many studies have looked into the validity of the National Board assessments and student outcomes investigating differences between successful and unsuccessful candidates (Bond, Smith, Baker, & Hattie, 2000; Goldhaber & Anthony, 2004; Vandervoort, Amrein-Beardsley & Berliner, 2004; Cavalluzzo, 2004). Results from these studies are mixed. One study suggests that NBCTs are more effective than teachers who applied for but did not achieve certification, but not compared to non-applicants (Cantrell, 2008). Research indicates that National Board impact may vary by subject matter (Harris & Sass, 2007). Some studies found no significant relationship between NBCTs and student achievement (Sanders, Ashton & Wright, 2005). However, in a synthesis by the National Research Council of student achievement studies, it was concluded that NBCTs make contributions to student learning above and beyond those without certification (Hakel, Koenig, & Elliot, 2008).

## **Support for NBPTS**

Support for NBPTS will be addressed according to the following categories: financial investment in NBPTS, student achievement and institutional investment. A variety of studies in each category was found to support NBPTS and will be discussed below.

### **Financial Investment**

Despite the positive research on the effects of NBCT, financial investment in the National Board for Professional Teaching Standards (NBPTS) has spawned researchers to question whether the expenditures are justified (Boyd, 2006). Two studies were found to support the financial investment. Calavuzzo found that the investment made by the Miami-Dade County School District in the National Board Certification of its teachers translated into an increase in ninth and tenth grade student math scores. The district spent over \$300,000 dollars on its 61 NBCTs. The study compared student math grades in classrooms of NBCTs to those of non-NBCTs and the results of the study satisfied school district leaders that its financial investment had a positive impact on student achievement because they saw an increase in the scores of students of NBCTs. Students with NBCTs gained 12 percent of a standard deviation more than others on the end-of-grade exams in mathematics. This increase satisfied district leaders that their investment in NBCTs was paying off in increased student achievement (Cavalluzzo, 2004). Another study examined the costs of the NBC model of professional development. Eight NBC candidate support programs in six states were the basis for the program design and four of the sites for the cost information. The study suggests that policymakers should pursue the NBC model as an alternative way to target professional development dollars. Included in the model were high quality standards and teacher reflection upon their current practices compared to those standards, portfolio development that integrates content and pedagogy, and enhancement of

content knowledge. The study compared NBC to alternative methods of teacher professional development and found that NBC is less costly than other forms. The study evaluated professional development costs associated with a programs schools typically use like seminars, teacher in-service speakers, and degree programs. The study found that NBC was less costly, when all costs are calculated including time spent working on professional development as well as program costs, than alternative forms of professional development (Cohen, 2005). These two studies support the financial investment of NBPTS for the impact on professional development leading to student achievement.

### **Student Achievement**

A number of studies were also identified that supported increases in student achievement due to NBCTs, although they did not specifically address the financial investment. A comparative study examined the impact of National Board Certified teachers' impact on student achievement verses teachers who failed to attain National Board Certification. The sample group of 64 teachers was comprised of 35 (55%) teachers who were National Board Certified and 29 (45%) teachers who attempted but failed to become National Board Certified. Based on the evaluation of the student work samples, the findings suggested that the student outcomes in most of the teachers' classrooms, regardless of certification status, were at the surface level (78%). However, students of NBCTs were almost twice as likely to achieve deeper learning outcomes on writing assignments scored holistically and analytically (Certified: 29%; Non-Certified: 14%). There was a statistically significant difference between the aims related to the depth of student learning of NBCTs and those who had attempted, but did not receive certification. The NBCTs were more likely to design lessons with the intention to foster deeper student



understanding related to writing including writing constructs such as controlling idea, organizational structure, elaboration, voice, and sentence formation (Smith, 2005).

In a study of 183 middle level teachers comparing classroom assessments, O'Sullivan found that classroom assessments from NBCTs received significantly higher ratings than those of non-NBCTs. NBCTs were rated an average of 2.38 on a scale of 1-3 (where 3 is high) while non-NBCTs were rated an average of 2.09 (O'Sullivan, 2005). A study encompassing several southern states compared the effectiveness of teachers of various credentials, including NBCTs and non-NBCTs. In this study the achievement on state tests of students of NBCTs was greater than those of non-NBCTs (Clotfelder, 2007). A study of 14 elementary schools in the Phoenix area also attributed learning gains on standardized tests of students with NBCTs. Academic indicators in students of NBCTs in three grade levels surpassed the scores of students in classrooms of non-NBCTs (Vandevoort, 2004).

Lustick and Sykes studied the impact of the NBC process on learning in science. One hundred twenty NBC candidate teachers were studied for two years. Transcripts of structured interviews were scored by multiple assessors related to the 13 NBC standards for accomplished science teaching. The study findings suggest that NBC had significant impact upon teachers' understanding of knowledge associated with science teaching with the greatest gains in Scientific Inquiry and Assessment. The results support the claim that the certification process is an effective, standards based, professional learning opportunity compared to other teacher professional development models which do not emphasize "standards-based practice" (Lustick, 2006). Similarly, a study conducted in the Los Angeles Unified School District analyzed data from 3,800 students in second through fifth grades. The study looked at math and language test scores for students of NBCTs, non-NBCTs and found that, when controlling for student and

classroom characteristics, students of NBCTs scores increased 7% percent in math, and 5% in language arts (Cantrell, 2008). These studies demonstrate an increase in student achievement with NBCT, but more so, in a number of studies it was evident that the increase occurred in the type of learning- learning which required a depth of knowledge and higher order thinking. Increases in student achievement coupled with improved professional learning can lead to a positive institutional impact.

### **Institutional Impact**

In addition to studying direct student achievement links, some limited studies have addressed the overall impact on the institution with NBCTs. The Washington Initiative, an effort to increase enrollment in the National Board for Professional Teaching Standards certification program, was the focus of a qualitative study by the Inverness Research Group (Stokes, 2004). The researchers interviewed teachers and college professors involved in candidate support programs in four universities in Washington State. The study found that the NBC process developed habits of increased reflection about teaching and an educational articulateness, meaning teachers were able to understand and clearly justify their actions in the classroom, according to faculty members interviewed (Stokes, 2004). The skill of reflecting on teaching and becoming articulate about classroom instruction should lead to an expertise which can be shared with other teachers in a school.

The distribution of expertise throughout a school promotes a professional community and expands the effectiveness of human capital within the organization, all of which have been identified as fostering professional improvement (Spillane, 2006; Frank, 2004; Loius 1996; Bryk, 2002). Sociometric data was used to measure the impact NBCTs had on other teachers in a study of NBCTs in 47 elementary schools in two southern states. Researchers found that teachers with

NBC were more likely to provide assistance to other teachers than were their non-NBCT counterparts. Statistical significance for the resulting data proved that any omitted confounding variable would have to have an impact six times larger than their strongest covariate to invalidate their findings (Frank, 2008). A “spillover” effect can be valuable to organizations and serve to extend expertise beyond the NBPTS teacher (Frank, 2008). Still, not all reports have been favorable and more research is necessary.

### **Criticism of NBPTS**

While there is a literature base supporting the NBC program (Cohen, 2005, Dagenhart, 2002; Petty, 2002; Ralph, 2003; Bond, 2000; Lustck, 2006; Whitman, 2002), research exists that is critical of the organization (NBPTS) and National Board Certification (Goldhaber, 2003; Honawar, 2008). Regardless of the published positive reports, many question whether NBCTs have any significant impact on increased student achievement. This section illustrates some of the critical views of the NBPTS certification evident in the literature addressing the fairness of NBPTS, and confounding variables related to student achievement.

### **Fairness of NBPTS**

Many detractors of the research supporting NBPTS contend that the National Board is not “fair”. Some regard it as an “insider’s” organization and cannot fairly evaluate its own members. They say studies on National Board Certification lack independence from the organization and focus on teacher behaviors instead of student outcomes. Some imply it is not fair due to the studies’ limited breadth. Incentives and salary supplements are also discussed as factors that impact the credibility of the process (Goldhaber, 2003).

Another area of fairness applies to who becomes NBCTs. The statistics of minority teachers attaining NBC is concerning to some researchers. A 2006 study noted that 6,428 white

teachers passed the credential compared to 403 black teachers, 301 Hispanic teachers, 69 Native American teachers and 100 Asian/Pacific Islanders achieved certification (Keller, 2007).

Minority teachers apply for NBPTS certification at a similar rate to the proportions of minority teachers in the workforce, however, their certification rate is a much lower proportion than Caucasians (Wayne, 2004). Researchers attribute the disparities in certification rates of minority candidates to the lack of support in high-poverty schools where higher percentages of minority teachers work (Goldhaber, 2003). The lack of NBCTs' presence in lower performing, lower income schools, and the deficit of minority teachers being empowered to be leaders are also factors contributing to lower minority completion rates (Humphrey, 2004). In addition, the fairness extends to treatment of student achievement data. Honawar (2008) points to slim margins of difference between students of NBCTs and students of their counterparts as lacking significance to prove that NBCTs are better teachers.

### **Student Achievement**

While there have been studies pointing to a positive relationship between student achievement and NBC, not all studies found attribute NBC to better student achievement. A study of three North Carolina school districts examined the differences in student achievement of NBCTs to the student achievement of non-NBCTs. The study looked at a sample group of 300 middle-school teachers and found that students of board-certified teachers performed slightly better (measured by mean test scores) than students of non-board certified teachers. However, the academic achievement differences between the groups were minor and not statistically significant. The study, conducted by researchers at The College of William and Mary, could not show significant differences between achievement of students of NBCTs compared to students of non-NBCTs (McColskey, 2006; Vaishali, 2006). A large study of over 30,000 elementary,

middle and high school math and language arts teachers in Florida compared curriculum-based end of year assessments between the years 2000-2004. This study found that in some grades and subject areas increases in student achievement were noted in classrooms of NBCTs, but the data was inconsistent. Evidence suggests that there were classrooms in other grades and subject areas in which no difference in student achievement was observed (Viadero, 2007). Stephens (2003) conducted a study comparing achievement scores of 154 students of NBCTs compared to 669 students of non-NBCTs finding no significant difference in achievement in 87% of a matched teacher comparisons method. A 2005 study based on two school districts in North Carolina found no significant difference between NBCTs and their peers. End of course exams for fourth through eighth graders were compared and student scores of NBCTs, non-NBCTs who attempted NBC but failed, and non-NBCTs who never attempted NBC were the same (Sanders, 2005). A study comparing student achievement of 307 fifth grade teachers found no statistical difference in scores of students of NBCTs to those of non-NBCTs. Other variables in the study, cognitive level of assigned student work in reading and teacher rating were mixed showing no definitive difference between the groups (McCloskey, 2006). These studies indicating little to no impact of NBC question its effectiveness as well as the need for more research to determine the effects of NBCTs and accomplished teaching.

### **Signal of Accomplished Teaching or Creating Accomplished Teachers**

The question of whether the NBC process identifies quality teachers or creates quality teachers is a frequent topic in the literature (Cavalluzzo, 2004; Goldhaber, 2007). One study that assessed the relationship between certification of NBCTs and elementary-level student achievement examined this question. The study concluded that the NBPTS assesses the most effective applicants and serves as a signal of teacher quality. This means the process of

certification for the NBPTS does not create accomplished teachers, rather NBC is identifying accomplished teachers (Goldhaber, 2007). Goldhaber said (2007):

Nonetheless, a significant amount of research does show a link between measures of teacher academic skills and student outcomes. Thus, our finding of a positive correlation between teacher Z-scores and NBPTS certification provides indirect evidence that the National Board is certifying teachers likely to be effective as measured by student outcomes. There may also be broader student achievement impacts of NBPTS certification as it is hoped that NBPTS teachers will serve as role models and mentors for new teachers, take on greater leadership roles, share effective teaching methods with colleagues, and improve the learning environment in schools. (p.24)

Goldhaber's findings (2007) suggest that NBC does not make good teachers, it simply identifies teachers who are already good. On the other hand, in a study previously cited by Cohen (2005) NBC was found to be a cost effective professional development model compared to alternatives. The study found the professional development associated with NBC to have an impact on improved teaching at a lower cost than degree programs and seminars (Cohen, 2005). So even if NBPTS identifies already effective teachers, this implies that the process of NBC makes them even better.

### **Teacher Professional Development**

There are commonalities in the literature related to the National Board Certification process and contemporary research about effective teacher professional development. In this next section the parallel will be explained from a historical perspective of teacher professional development. It will describe how the NBC process meshes with modern effective professional development for teachers.

In the decades prior to and since *A Nation at Risk* (1983) and the national reforms of the 80s and 90s teacher professional development had traditionally been provided to teachers through in-service workshops. These workshops are typically a one-time training by an “expert.” This method of teacher professional development has been routinely criticized as being disconnected from the complexities of teaching, contrary to best practices in adult learning, incoherent and inconsistent (Little, 1994; Guskey, 1995). The workshop method has prevailed in teacher professional training because alternative methods have not proven to be financially or organizationally feasible (Little, 1994; Darling-Hammond, 1995). Embedded elements of school culture and infrastructure need to be examined if effective changes in teacher professional development are to take hold (Darling-Hammond, 1995). One of these is the encouraging of reflective practice.

### **Reflective Practice**

Dewey (1933) stated, “We learn by doing and realising what came from what we did,” explaining in layman’s terms the essence of teaching, learning and reflecting on practice. Shon concurs that reflective practice is a concept to be used to improve teaching and learning. Many sources in the literature cite the reflective nature of the NBPTS process as important to improving classroom instruction. If it is assumed that more reflective practitioners make better teachers, then the process of applying to the NBPTS and the evaluation process should translate to better classroom instruction (Park, Oliver, Johnson Graham and Oppong, 2007). A comparative study which examined the interactions among teachers who were seeking National Board Certification concluded that teacher interactions enhanced reflection on teaching practice (Park, Oliver, Johnson Graham and Oppong, 2007).

Reflective practice, or the careful review of and thoughtfulness about one's own teaching process (Stronge, 2002), has been identified as a necessary process for improved instructional practice (Dewey, 1933; Argyris, 1974; Schon, 1983). Taking an introspective look at one's work has been an on-going topic of literature- at least since the writings of Dewey in the early 1900s. Dewey defined reflection as, "an active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusion to which it tends" (Dewey, 1933). Many social scientists and psychologists have built upon Dewey's theories. Schon was one of them. In turn, his work was strongly influenced by a collaboration with Argyris (1974) when they developed theories concerned with professional learning processes and developed critical, self-reflective practices as they related to constantly changing social systems (Argyris, 1974). However, it was Schon who formalized the process of reflective practice to what was coined "reflection-on-practice" and "reflection-in-practice," both practices encouraged by the NBPTS (1983). Reflection later became part of a more formal process of looking at what one has done, assessing the effectiveness of the act, and then adjusting future acts. This reflection-on-action theory was developed by Schon and described as a movement from technical rationality to better develop professional knowledge within the professional context (Schon, 1983). Schon purported that organizations are in a continuous process of transformation and that these transformations need to be guided, influenced and managed (1983). One way for teachers to manage their personal transformation- their thinking about student work and their teaching- is through teacher portfolios.

### **Teacher Portfolios**

Keeping a portfolio of one's work and student work as evidence of accomplishment is a mainstay of the NBC process. It is one way to observe one's professional life. There is much



research to support this practice. Teacher portfolios have been defined as a structured collection of evidence of a teacher's best work that is selective, reflective, and collaborative, and demonstrates a teacher's accomplishments over time and across a variety of contexts (Wolf, 1991). A well-documented advantage of using portfolios is their facilitation of reflective practice (Attinello, 2004). The process of compiling a portfolio gives a teacher the chance to analyze what they have done (Shulman, 1988). Portfolios "enable you to reflect on the significance of everyday assignments and experiences with students" (Campbell, 2001, p. 50). An additional attribute of maintaining a teaching portfolio is the power of sharing and discussing it with someone else as collaborative reflection.

### **Collaborative Reflection**

Teacher professional development and the role of the supervisor have been evolving over the last few decades (Sergiovanni, 1993). Nolan (1992) suggests in his work that supervisors are taking more collegial, less hierarchical roles in facilitating teacher development. The relationship between a principal as a supervisor and a teacher should be less critical and more of a collaborative partnership if the supervisor really wants to move beyond surface issues to develop deep, enduring change in a teacher's practices (Nolan, 1992). This collaborative partnership leads to collaborative reflection. Collaborative reflection is crucial to meeting the needs of teaching (Baird, 1991) and an integral component for finding solutions in the classroom (Grunshka, 2005). This can take place within the mentoring relationship. Commonly, new teachers are given faculty mentors to help facilitate their growth in an educational system (Sundli, 2007). Mentoring can also foster reflection and collaboration, facilitate a focus for professional growth and help new teachers analyze their strengths and weaknesses (Riggs, 1997). Working within a professional culture that is inquisitive, reflective and improvement focused can

also reawaken veteran teachers (Lambert, 2003). Since teaching is less about telling and more about understanding how to guide someone's understanding (McNiff, 1993) it is essential for teachers to be involved in practices of reflection and discourse with other practitioners. This collaborative reflection and discourse can lead to new thinking about teaching, comprehension of curriculum and standards and risk taking in new approaches.

### **Relevance to Practice and Standards**

Complex learning, which includes problem solving and application of knowledge, requires new approaches to teaching (Danielson, 2000). Teacher training must bridge the gap between theory and practice for every teacher (Garcia, 2007). Retention of newly formed knowledge is most prevalent when assessed through authentic measures (Schrock, 1997). Danielson asserts that professional learning becomes authentic when it encompasses elements of self-assessment, collaboration and reflection (2000). This includes assessment of students' work, dialog with colleagues to gain multiple points of view and engagement in self-reflective practices (Danielson, 2000). Assessment of one's performance is only valuable if it is credible and conducted within a usable context (Rahn, 1997). A constructivist approach to professional development allows professionals to take responsibility for their own learning and thinking (Freedman, 1998). As reflective practitioners, teachers can make connections between their current work and knowledge gained from prior experiences (McLaughlin, 1998). Teacher development must focus on deepening teachers' understanding of the processes of teaching and learning and of the students they teach. Effective professional development involves teachers both as learners and as teachers and allows them to struggle with the uncertainties that accompany each role. It has a number of characteristics;

- It must engage teachers in concrete tasks of teaching, assessment, observation, and reflection that illuminate the processes of learning and development.
- It must be grounded in inquiry, reflection, and experimentation that are participant-driven.
- It must be collaborative, involving a sharing of knowledge among educators and a focus on teachers' communities of practice rather than on individual teachers.
- It must be connected to and derived from teachers' work with their students (Darling-Hammond, 1995).

All of which are aspects of the National Board Certification process. Higgins (2001) argues that teacher training practices should be based on practically wise teaching and sound educational exemplars. Because reflecting on one's practice is based on local frames of traditions, language and prejudices, interpretations are biased and may not reflect appropriately the best solution to perceived problems (Eryaman, 2007). As Schon is credited with moving teacher development out of the traditional-technical preparation program to a progressive teacher education, Higgins purports that the movement should be in the direction of phronesis, or practical wisdom (2001). Thus, reflective practice should be steeped in a set of standards like those developed by the NBPTS for NBC. Studies of teacher preparation programs which emphasize using case analysis and reflective journal groups suggest that pre-service teachers become more reflective practitioners when they are taught to use reflective practices rather than lecture based instruction (Malkani, 2005). One successful way of moving reflection out into the realm of deliberation is by using dialog and response journals (Lee, 2007). Promoting an environment of reflection and dialog within the construct of sound educational practice can be facilitated in many ways. It has been suggested that reflective teacher portfolios may be the answer to providing a structured framework of educational best practice, while keeping the reflective component intact. A

number of national and state organizations, including the National Board for Professional Teaching Standards, have recognized portfolios as a valuable assessment tool for teachers. Elements that are naturally inherent in the portfolios process, such as, teacher support, reflection on one's abilities, collaboration, and collegiality, have all been identified as important aspects of teacher development (Tucker, 2002; NBPTS, 2008). These are integral to the NBC process.

### **National Board Certification Process**

In the mid-1980's, the National Board for Professional Teaching Standards identified the knowledge and skill which they believed characterized quality teaching. Professional subject area standards for teachers were created and a voluntary system for National Board Certification was initiated. Any k-12 teacher with a valid teaching certificate, three years of service, and a baccalaureate degree is eligible to apply for National Board Certification (Jenkins, 2000).

The National Board for Professional Teaching Standards (2009) bases its certification on the knowledge, skills, and commitments of teaching evident in five core propositions discussed in this section. Portfolios and assessment-center exercises are required to complete the certification process and to identify teachers who have demonstrated high levels of knowledge and enhanced student learning (NBPTS, 2009). National Board Certified teachers recognize the effects that the process has on their instructional practice. The outcome of this rigorous process, for many teachers, has been the ability to know what good instruction is, then constantly analyze teaching and make instructional adjustments (Jenkins, 2000).

The National Board assesses teachers based on an assessment system in 25 subject areas. Teachers engage in professional study, self-assessment, evaluation, and peer review (NBPTS, 2011). Analysis and reflection of small and large group work, analysis of individual student work, documented accomplishment of work done outside of the classroom, and an online

assessment exercise to measure subject-matter expertise are all part of the certification process (NBPTS, 2011).

Teachers work is measured by standards based on five core propositions through a portfolio which includes samples of student work, video recorded lessons and analysis, and written exercises (Ross, 2006).

The NBPTS Five Core Propositions include:

- Proposition 1: Teachers are Committed to Students and Their Learning
  - NBCTs are dedicated to making knowledge accessible to all students. They believe all students can learn.
  - They treat students equitably. They recognize the individual differences that distinguish their students from one another and they take account for these differences in their practice.
  - NBCTs understand how students develop and learn.
  - They respect the cultural and family differences students bring to their classroom.
  - They are concerned with their students' self-concept, their motivation and the effects of learning on peer relationships.
  - NBCTs are also concerned with the development of character and civic responsibility.
- Proposition 2: Teachers Know the Subjects They Teach and How to Teach Those Subjects to Students.
  - NBCTs have mastery over the subject(s) they teach. They have a deep understanding of the history, structure and real-world applications of the subject.

- They have skill and experience in teaching it, and they are very familiar with the skills gaps and preconceptions students may bring to the subject.
- They are able to use diverse instructional strategies to teach for understanding.
- Proposition 3: Teachers are Responsible for Managing and Monitoring Student Learning.
  - NBCTs deliver effective instruction. They move fluently through a range of instructional techniques, keeping students motivated, engaged and focused.
  - They know how to engage students to ensure a disciplined learning environment, and how to organize instruction to meet instructional goals.
  - NBCTs know how to assess the progress of individual students as well as the class as a whole.
  - They use multiple methods for measuring student growth and understanding, and they can clearly explain student performance to parents.
- Proposition 4: Teachers Think Systematically about Their Practice and Learn from Experience.
  - NBCTs model what it means to be an educated person – they read, they question, they create and they are willing to try new things.
  - They are familiar with learning theories and instructional strategies and stay abreast of current issues in American education.
  - They critically examine their practice on a regular basis to deepen knowledge, expand their repertoire of skills, and incorporate new findings into their practice.
- Proposition 5: Teachers are Members of Learning Communities.
  - NBCTs collaborate with others to improve student learning.

- They are leaders and actively know how to seek and build partnerships with community groups and businesses.
- They work with other professionals on instructional policy, curriculum development and staff development.
- They can evaluate school progress and the allocation of resources in order to meet state and local education objectives.
- They know how to work collaboratively with parents to engage them productively in the work of the school (NBPTS, 2008).

### **Logistics of the Certification Process**

Portfolios differ slightly from content area to content area, however the process and sections are very similar for each area. The certification takes from one to three years and can require up to 400 hours of assessment. The portfolio typically consists of four sections, with the exception of the “Professional Contribution” section, each contains written commentary, samples of student work, instructional materials, videotaped lessons, and reflective summary (Ross, 2006; NBPTS, 2008). Application and assessment completion takes at least one calendar year. Teachers wishing to apply for the certification begin the process by submitting a \$65 non-refundable processing fee with their completed application prior to December 31<sup>st</sup>. Complete payment of \$2500, including a non-refundable \$500 fee, must be submitted by January 31 and a candidate’s completed portfolio is submitted prior to March 31. Candidates may complete the online, 30 minute constructed response subject-matter exam between July 1 and July 15 at an assessment center. Scores are reported to the candidate by December 31 of that year (NBPTS, 2008). Approximately 40% of teachers who complete the process will successfully attain certification in one year. Sixty five percent will achieve the certification after three years

(NBPTS, 2007). The certification is valid for ten years (Ross, 2006). Those completing it may work independently, but may also work collaboratively for support.

### **Supports Necessary**

The literature related to National Board Certification suggests that successful attainment of the credential requires a network of support for candidates (Goldhaber, 2003). The next paragraphs summarize some of this literature which can be best categorized as technical supports and affective supports.

#### **Technical and Affective Support**

Technical supports include portfolio guidance, tutorials, help videotaping lessons, and assessment center instructions. Affective supports include encouragement, time, family support, and recognition of one's efforts. Bales' dissertation (2004) identified the assistive supports necessary for teachers to successfully attain National Board Certification. Bales interviewed National Board Certified teachers, their colleagues and their administrators to determine the nature of these supports. Supports identified in the study included encouragement, technical assistance videotaping lessons, proofreading, additional support personnel in the classroom, release time from professional responsibilities, supportive family members who attended to home duties, and full scholarships for fees (Bales, 2004). Anecdotal data gleaned from pilot interviews for this study in Grove City were consistent with Bales' findings (E. Roppelt, L. Anthony, D. Taylor, personal communication, November 17, 2008). Lori Anthony reported that having a mentor who already went through the experience was reassuring (personal communication, November 17, 2008). Having a support group which met frequently was also reported as being a positive aspect of the process (E. Roppelt, L. Anthony, D. Taylor, personal communication, November 17, 2008). In a case study of the Belleview Washington school



district, it was revealed that teacher application fees of \$2565 were paid by the district, unlike other schools in the state (Riley, 2006). In addition, the district provided coaches, videotaping services from professional videographers, release time, and supplemental salaried work days for teachers applying for certification (Riley, 2006). NBCTs who experienced these supports believed that they would not have completed the process without it. Some completers also benefitted from mentoring.

## **Mentoring**

Mentoring is one popular way to give teachers a perspective of sound educational practice in addition to assist with collaborative reflection (Sundli, 2007). Soonhye (2007) found that the NBPTS practice of supporting teachers through the use of mentors promoted teacher collaboration and the establishment of professional dialog. In another study examining the impact of mentoring on the NBC process, a constant comparative method was used to analyze qualitative interviews with 14 teachers who were considering the NBC process, in the process or had been awarded NBC. The study found that mentoring had a positive impact on teaching and learning by enhancing reflection on teaching practice, establishing a professional discourse, raising standards for teaching criteria and facilitating collaboration (Park, 2007).

Fruend (2005) also investigated the relationship between mentors and successful candidates. Although some view mentoring as an effective support for the attainment of National Board Certification, critics of the NBC suggested that the research base which examines the mentor relationship and successful attainment of NBC is diminutive, although positive (Fruend, 2005). Like the responses from the Grove City group (2008), Fruend found that complex formal and informal mentoring was highly regarded by candidates as helpful in the portfolio process (2005). The reflection provided by mentoring, assisted candidates in the

assessment center preparation, provided individualized feedback, and close analysis of portfolios (Fruend, 2005).

Additionally, a study conducted in 2007 found increased interaction between teachers to be a positive outcome of the certification process (Park, 2007). While not directly mentoring, the teachers collaborated and mentored one another. The purpose of this comparative study, previously cited and described in this chapter, was to examine the interactions among teachers who were seeking National Board Certification. It concluded that teacher interactions with colleagues enhanced reflection on practice, established professional discourse, raised teacher standards, and increased teacher collaboration (Park, 2007). This could be perceived as one motivation to complete the process.

### **Motivation to Complete**

Identifying the reasons teachers in Pennsylvania completed the certification is the underlying inquiry in this study. To develop a base of understanding related to motivation, specific studies and literature were used to connect the broader research on the topic to research about teachers who successfully completed the NBC process. The next pages will explore this research.

The impact of intrinsic and extrinsic types of motivation on human behavior has been widely studied (2000). Our rewards systems for education, work, athletics, and social relationships are built on the careful interplay between the two types of motivating factors since the time of plato (Ryan, 2000; Deci, 1995). The classic definitions of intrinsic and extrinsic motivation are reviewed in their work in light of contemporary research and theory (Ryan, 2000). Humans have an innate need to learn and assimilate information from their surroundings (Ryan, 2000; Deci, 1995). Intrinsic motivation continues to be an important part of human

accomplishment today. While extrinsic motivation varies considerably in its forms and frequencies it can also have a positive impact on human performance (Ryan, 2000). However, extrinsic factors can either reflect external control or it can reflect self-regulation, of which both forms are necessary to meet basic human needs of autonomy and competency (Ryan, 2000). According to a 2007 publication in the journal, *Science*, improvements in imaging technology have enabled brain researchers to visually display brain activity (Pessiglione, 2007). The article described a recent study which investigated the relationship between extrinsic rewards and the level of force one is willing to exert toward a goal showed that brain activity in the forebrain region increased when a subject anticipated gaining larger rewards (Pessiglione, 2007). According to the report, increased exertion existed even when the amount of reward was unknown, leading researchers to generalize that individuals will exert more force, or energy, when a larger reward is anticipated (Pessiglione, 2007). Thus, a perception of receiving a larger extrinsic reward seems to energize behavior (Pessiglione, 2007). This could have telling effects in relation to teacher work. According to a US Department of Education report in 2003, Douglas County School District in Colorado is one of the few teacher compensation systems in the United States which rewards teachers for performance (Reichardt, 2003). The system, which has been in place since 1994, was the focus of a US Department of Education study addressing the impact of that system on teacher recruitment and retention. It revealed data which supports the concept of rewards for performance (Reichardt, 2003). The system rewards teachers for individual accomplishments and allows for group incentives as well (Reichardt, 2003). Although the system does not seem to attract new teachers, it has been successful in retaining teachers at levels significantly higher than the state average even though salary increases for performance accounts

for an average increase in teacher salary of less than 2% (Reichardt, 2003). This could be the impetus for more merit rewards in compensation.

Compensation rewards for completion of the National Board for Professional Teaching Standards have become more common in the United States since its inception in more than 700 school districts in the country, located in all 50 states and the District of Columbia, support the NBC process and over 540 school districts now offer some type of monetary reward for NBC teachers (Wright, 1997; NBPTS, 2008). The average reward is typically around \$2500 dollars. However, increases range from \$1000 a year in some districts to a onetime bonus of \$20,000 in California for a NBC teacher working in a low-performing school. Florida awards its NBC teachers a 10% salary bonus (NBPTS, 2007). Some advocates for performance based pay compensation for teachers are suggesting that the NBPTS system provides an excellent, existing model of teacher assessment which could be adopted as a performance pay program in school districts (Wright, 1997). A 2002 study of 16 NBCTs in Tennessee by Stone concluded that, although NBCTs had positive gains in their classroom scores of about 2%, the gains were not sufficient to qualify them for bonus pay. Gains of 15% were required for teachers to realize the Chattanooga School District merit pay incentive (Stone, 2002). The study was unable to quantify the effect of incentives tied to student performance, however, a different story is told by the qualitative data discussed in the next paragraphs.

Measuring student success can be a difficult process and not everyone agrees that performance based compensation systems produce better employees. A study of merit pay systems suggests that the appeal of merit pay based on intuition and theory affect minimal results. Individual rewards for performance develop biases which can affect individual performance judgments. The reward becomes more important than the quality of the activity, for

instance- this is why sometimes students highly motivated to achieve good grades will cheat.

The grades become more important than learning. An alternative plan mentioned in the Douglas County study, focused on group accomplishments (Campbell, 1998; Reichardt, 2003).

Additionally, there are factors other than salary increases which may be more important to increasing performance. A meta-analysis of 128 studies which explored the relationship between extrinsic reward and intrinsic motivation elicited findings which are pertinent here. First, the meta-analysis found that performance rewards had a negative impact on free-choice intrinsic motivation and self-reported interest in a task. However, positive feedback enhanced both free-choice behavior and self-reported interest (Deci, 1999). The basis of this study is to identify if there are factors more strongly associated with completion than monetary rewards for the certification.

There is research on NBPTS with anecdotal accounts of teacher testimony addressing why they chose to complete the certification process (Riley, 2007). Many of those stories include the positive impacts teachers feel the certification has had on their professional development. According to one NBCT, “It was the very best professional development of my career (personal communication with David Anthony, November 17, 2008).” Focusing on learning objectives, a commitment to the learning of all students, a deeper understanding of formative assessment, the increased ability to change instructional strategies based on student performance, and a deeper reflection on their teaching are all common responses in the anecdotal records (Riley, 2007). Intrinsic factors like a sense of accomplishment as well as extrinsic reasons such as, increased salary, increased marketability when searching for a new job, increased respect from peers, and a desire to increase their proficiency as a teacher were identified as motivating factors for teachers to apply to the National Board Certification program

(personal communications, April 17, 2008; November 17, 2008; May 27, 2008). Still, the belief in the power of intrinsic rewards has infiltrated many decisions related to NBC.

### **Incentives**

Many states and school districts have used incentives to encourage National Board certification. The incentives have been used to recruit teachers to the NBC process, help retain teachers in particular districts and to attract teachers to a particular district or school. An emphasis on placing high quality teachers in high-need schools has resulted in an increasing number of states offering targeted incentives for NBCTs to work in lower-performing school. In 2006 the U S Department of Education initiated The Teacher Incentive Fund. It is an example of the interest in exploring alternative compensation systems with the hope of improving performance, attracting and retaining accomplished teachers in schools in which they are most needed. A number of studies have examined the impact of various incentives to improve teacher recruitment and retention. Clotfelter (2008) researched the impact of a program in North Carolina developed to provide supplemental compensation for teachers in the areas of mathematics and science to work in high-poverty or low-performing schools (2008). An increase of salary of \$1,800 reduced the average turnover rates in the targeted schools by 17 percent. Stipends that are given as a one-time bonus compared to incentives that are permanent salary increases were also examined in another study, finding that one-time bonuses did not encourage teachers to stay in targeted schools after receiving the bonus (Fowler, 2003). Still, alternative compensation programs are gaining popularity. These merit pay programs use measures of teachers' instructional expertise, unlike traditional teacher salary schedule, which pays teachers increments, based on longevity, and does not reward teachers for their instructional expertise (Odden & Kelly, 2002). The incentive reward provided attainment of the National

Board certification is an example of a merit pay program which rewards teachers for their instructional knowledge and ability (Milanowski, 2003; Heneman & Milanowski, 2004). While incentives, extrinsic or otherwise, may have encouraged completion of the NBCT process, there are also obstacles to successful completion.

### **Obstacles to Completion**

The research literature identifies several factors which impede a candidate's progress toward successful completion of the assessment portfolio and eventual certification (Stokes, 2004; Bales, 2004; Wayne, 2004). Accordingly, only 40% of candidates achieve the certification in one calendar year and 65% of candidates complete the certification in three years (NBPTS, 2007). The factors identified for this reality are varied. From technical issues related to the application process and portfolio assessment, to issues with time management and one's writing ability, to complications in evaluating portfolios will be addressed in the next sections.

### **NBC Biases**

Biases identified earlier related to the number of NBCTs in high poverty, high minority schools has been discussed. However, another type of bias has been examined as well. Researchers looked at four university programs working with NBPTS in the "Washington Initiative" and found that the standardization of the evaluation process may inhibit some truly excellent teachers from being able to portray their bona fide excellence (Stokes, 2004). The process weighs heavily on a candidate's writing ability, thus excellent teachers who may not be gifted writers may be misrepresented in the portfolio, as well as, possible issues with the inter-reader reliability of the process due to the number of readers assessing portfolios across the country (Stokes, 2004). However, the biggest obstacle identified by Stokes may be the inability for many teachers to apply (2004). Many low performing schools do not have the resources

available to teachers in the form of supports, discussed earlier in this chapter, like technical assistance, release time, assistants in the classroom, and tuition scholarships (Bales, 2004). Fees associated with the process are also prohibitive to those teachers working in high poverty schools (Wayne, 2004).

### **Lack of Objectivity in NBPTS**

Aside from the technical obstacles involved with the evaluation process, there may be some issues in perception of National Board Certification and its governing organization which may prevent qualified candidates from pursuing the certification. The perception that the NBPTS is an organization run by educators incapable of fairly assessing its candidates hurt its credibility (Wilcox, 1999). Salary increases, incentives and full tuition scholarships also wound the organizations credibility and draw questions about teachers' motives for seeking the certification (Goldhaber, 2003). Some critics purport that the large number of NBC teachers also weakens its prestige (Keller, 2007). The National Board has attempted to overcome these obstacles, however, there are still a relatively small number of teachers applying for the certification and a reality that only 40% are accomplishing the task in their first attempt. This is a relatively small first time success rate compared to the 85.3% of lawyers who pass the Bar Exam on their first try (Case, 2012) and the 85% of doctors who pass their boards on the first attempt (American Board of Internal Medicine, 2012).

### **NBC in Pennsylvania**

Policies regarding tuition costs, scholarships, and financial incentives vary widely in the U S and some states offer full scholarships and relatively large financial bonuses after a teacher attains the certification. As of 2009, Pennsylvania financed 50% of tuition costs for NBC and the NBPTS offers a scholarship for the remaining 50% for Pennsylvania teachers



(NBPTS, 2009). However, those scholarships have been cut at the state level. There are still some programs in the state that offer financial support for tuition costs. There are 47 school districts in the state which reported offering a financial incentive for successful attainment of the credential according to NBPTS records. According to Dr. Walter Jordan-Davis, Regional Outreach Director for NBPTS, state leaders play a significant role in providing the resources necessary for candidates to successfully attain the certification (personal communication, September 21, 2008). Scholarships, candidate support funding and recognition of successful candidates have been the focus of meetings with key stake holders in Pennsylvania. Representatives from the Pennsylvania Department of Education (PDE), candidate support programs and NBPTS staff all coordinate efforts to enhance the program and to leverage more support for the NBC in Pennsylvania (personal communications, February 22, 2008; March 17, 2008; May 16, 2008; September 22, 2008). Pennsylvania has experienced an increase in the number of teachers applying for National Board Certification in recent years. According to the NBPTS database, in Pennsylvania 139 first time applicants paid the \$65 application fee for National Board Certification in 2004 and there were 241 first time applicants in 2008. Although applicants hail from all parts of the state, of the 501 school districts in Pennsylvania, 78 have had successful candidates prior to the 2008-09 school year. Of those school districts, 28 again have candidates applying in 2008. This study will focus on the successful completers from Pennsylvania to contribute to the literature on NBCT motivation.

### **Summary**

There is a wealth of research available related to the National Board Certification in the literature. Various elements of the certification process have been touted as effective, necessary elements for teacher professional development, and many studies support these notions.

However, some are critical of the NBPTS for being a regulatory body which is run by educators, flawed and they don't see the process as having an impact which justifies its costs. After an exhaustive review of the literature, one aspect is clear. The research is ambiguous. Studies which find evidence that NBCTs are better at increasing student achievement are criticized as having no significance. Studies identifying the NBC as a signal of accomplished teaching and some studies report it being cost effective professional development. Most importantly to this study, there is no research explicit to Pennsylvania teachers in the literature body. The purpose of this study is to look specifically at teachers in Pennsylvania who have achieved NBPTS certification- what motivated them to initiate and then complete the rigorous assessment, and what is the perceived impact of the certification on their teaching. Chapter three details the methodology incorporated in the study. Analysis of the qualitative and quantitative data derived from the study, as well as conclusions drawn from patterns in the data will follow.

## CHAPTER III

### METHODOLOGY

This chapter presents the methodology used to address the research questions posed in the study. An overview and purpose of the study is followed by a discussion of the study design. The study's participants and sampling methods are described and the instruments and protocols used in the study are presented. Methods used in the collection of data and data analysis are described. A discussion of ethical and confidentiality concerns are presented and the chapter concludes with a summary.

#### **Quantitative Methods**

Quantitative methods are utilized in the study in the online survey instrument as it employs a Likert scale which generates quantitative data. A quantitative approach is practical since: (a) the research procedures were implemented prior to initiation of the study; (b) the researcher maintained control over possible interference factors that could have inhibited data collection; (c) sufficiently large samples of participants were used; and (d) data analyses that rely on statistical procedures were the employed method (Gay, 2006). The survey addressed the first research question; What motivated Pennsylvania teachers to engage in the National Board Certification process? Variables such as a financial incentive, recognition, leadership, professional improvement, gender, years of teaching experience and grade levels taught were analyzed.

#### **Qualitative Methods**

Qualitative methods in the form of researcher interviews of NBCTs were utilized to obtain additional information and more in-depth explanations of numerical data collected from the online survey. The interviews are used to collect data to answer research question number two; What factors led teachers to persist to successful completion of the National Board Certification

process? and research question number three; What is the perceived impact of National Board Certification on teaching? Phone interviews were conducted with a sample group of survey respondents. The resulting qualitative data was collected and then analyzed with a constant comparative method to identify initial motivating factors and factors of persistence. Data analysis is more completely described in this chapter and thoroughly discussed in Chapter four. Recommendations from the resulting data are presented in chapter five of the study.

### **Introduction**

The research design, research questions and instruments in the study were developed with the help of experts in the Pennsylvania Department of Education, members of the regional National Board for Professional Teaching Standards staff members, leaders of regional Centers for Teaching Excellence, and National Board Certified Teachers in Pennsylvania. Stakeholders in the NBC movement in Pennsylvania were interested in knowing why teachers applied for the certification in the state. In the course of interviewing NBCTs and NBC mentors as background for the study, it became evident to the researcher that many successful completers of the certification process underwent changes as a result of the reflective practice and mentoring involved in the NBC process. Therefore, the motivating factors of increased salary, increased stature, recognition for their competency, gateway to a leadership position, and becoming better practitioners, which were initially identified as motivating factors to begin the NBC process, were not the factors which led them to persist to successful completion in the end. Separate themes emerged after initial interviews with NBCTs in study pilot; initial motivation of teachers to begin the process and persistence of the teachers to complete the certification. Additionally, teachers were reporting changes in their professional practice which led to the development of research question number three. Identifying the motivating factors, factors of persistence and

perceptions of the impact of certification on practice of successful candidates will be beneficial in recruiting and supporting teachers in their attainment of National Board certification in Pennsylvania.

### **Overview of the study**

The study focuses on eliciting motivating factors, factors of persistence and perceived impact of certification on practice from teachers who have attained National Board Certification in Pennsylvania. These factors will be derived from quantitative and qualitative measures embedded in an online survey and interviews with national board certified teachers in Pennsylvania. The use of mixed research methods, quantitative and qualitative, provides the researcher with a system which brings out the strengths of both methods (Gay, Mills & Airasian, 2006). The data will be collected, coded and analyzed to determine factors of motivation, persistence and perceived impact of the certification process on practice. Recommendations based on the analysis will be presented in Chapter Five.

### **Purpose**

This study is designed to identify the motivating factors which led teachers to initially apply for and persist to the successful attainment of National Board Certification. The purpose of this study is to identify to what degree teachers in Pennsylvania were motivated to engage in, and complete, this rigorous process by factors such as financial incentive, leadership, recognition and professional improvement. Digging deeper, the study's purpose is to identify the factors which led teachers to persist to successful completion of the National Board Certification process. The perceived impact of NBC on teacher's instructional practice will also be examined.

### **Research Questions**

1. What motivated Pennsylvania teachers to engage in the National Board Certification process? Independent variables such as a financial incentive, recognition, leadership, and professional improvement will be analyzed.
2. What factors led teachers to persist to successful completion of the National Board Certification process?
3. What is the perceived impact of National Board Certification on teaching?

### **Population**

The population for this case study was the 496 National Board Certified teachers in Pennsylvania at the time of the survey distribution. The total population was asked to participate in the online survey. A sample group of 15 teachers participated in phone interviews. Four hundred Pennsylvania NBCTs were sent an email (Appendix D) explaining the study. The email outlined instructions for the NBCT to follow in order to complete the survey. Informed consent information” (Appendix E) outlining the purpose of the research, potential risks to research participants, participant’s rights and investigator contact information was emailed to participants as well. Each responding survey participant was assigned a number and a fictitious name to protect the identity of the respondent. The researcher randomly selected 15 survey participants by using a computer based randomizing software called “Research Randomizer” found at <http://www.randomizer.org> to select fifteen numbers. The program uses a JavaScript random number generator to produce customized sets of random numbers. Once the interview group was established, the interviewer conducted telephone interviews with each of the 15 randomly selected NBCT’s.

## **Data Collection**

Throughout the study it was necessary to revisit the literature base and interview notes to better assimilate new information with the existing information pool. Data collection was conducted in two forms. The first form of data collected was quantitative data from the online survey. The second form of data was qualitative data from telephone interview notes. Collection methods and instruments are more thoroughly explained in the subsequent sections.

## **Identification of the Population**

The study began with the identification of teachers in Pennsylvania who successfully attained National Board Certification. Initially the researcher was given permission to access the NBPTS data base for demographic and contact information. A policy change at NBPTS after the initiation of the study restricted the researcher's access to demographic information in the public domain on the NBPTS website. The researcher obtained the demographic data from the website [www.NBPTS.org](http://www.NBPTS.org) and the following demographic data was collected from the site; NBCT name, school district, certification year and certification area by state. The population of NBCTs in Pennsylvania was 496 at the time. The researcher searched school district information for the 496 NBCT's in Pennsylvania. School district email data bases were searched for NBCTs attributed to particular districts or formatting patterns were used to format NBCT email addresses. Four hundred NBCTs' email addresses were discovered using these methods. Ninety-six NBCT email addresses could not be ascertained for reasons including; no school district attributed to the NBCT, the school district had a data base of teacher email addresses and a particular NBCT was not in the data base, or the email was returned as invalid. An email introducing the study (Appendix D), along with an informed consent form (Appendix E) and instructions about how to complete the online survey (Appendix D) were emailed to each of the

NBCTs. Participants completed the survey via the online survey tool Qualtrics. Four launches of the survey were attempted getting 88 responses out of 400 valid email addresses, or 22% of the overall group of valid email addresses. Interview questions (appendix F) were asked, via telephone, by the researcher to 15 NBCTs who responded to the survey. Survey data and interview data was collected and analyzed.

### **The Survey**

NBCTs completed the online survey of Likert type questions delivered via Qualtrics Survey Software. The survey was developed and validated by the researcher. It asked NBCTs questions about the motivating factors which led them to pursue National Board Certification. The survey statements (Appendix G) were developed through suggestions by National Board for Teacher Professional Standards staff members, directors of Pennsylvania Centers for Teaching Excellence, candidate support providers, and Pennsylvania Department of Education staff members.

### **Validity**

The degree to which a test measures the content it is designed to measure is content validity (Gay, 2006). The survey questions were examined by a panel of experts in the field of National Board Certification. Although there is no way to numerically express the judgment of adequacy (Best, 1989) content validity is determined by expert judgment (Gay, 2006). Two perspectives are examined in content validity, item validity and sampling. Item validity looks at whether test items are relevant to measure the intended content. Sampling looks at how well the selected questions measure the total content area being tested (Gay, 2006). Several validation procedures were used in this study. First, a panel of experts was interviewed in a series of focus group meetings to derive possible survey questions. The researcher met with the group on



Friday, February 22, 2008; Monday, March 17, 2008; Friday, May 16, 2008; and Monday, September 22, 2008, for the purpose of learning more about the NBC process in Pennsylvania, and to solicit the group's input in developing the survey questions (Table 2). Additional interviews were conducted with Dr. Walter Jordan-Davis, Regional Outreach Director for NBPTS, on Sunday, September 21, 2008 to gain a better understanding of the NBPTS and its procedures, philosophies as a regional and national organization (Table 2).

Table 2

*Meetings with representatives of the NBPTS, PDE, and directors of Pennsylvania Centers for teaching excellence.*

---

Friday, February 22, 2008	National Board Meeting at Pennsylvania Department of Education
Monday, March 17, 2008	National Board Meeting at Pennsylvania Department of Education
Friday, May 16, 2008	National Board Meeting at Pennsylvania Department of Education
Sunday, September 21, 2008	Meeting with Dr. Walter Jordan-Davis, Regional Outreach Director for NBPTS, Harrisburg, PA
Monday, September 22, 2008	National Board Meeting at Pennsylvania Department of Education
Saturday, October 04, 2008	Meeting with Steve Shriner, NBPTS Candidate Support

---

The panel was composed of:

Dr. Walter Jordan-Davis, National Board of Professional Teaching Standards

Dr. Douglas Lare, Center for Teaching Excellence Director at East Stroudsburg University

Dr. Linda Cook, Center for Teaching Excellence Director at Gannon University

Dr. Joseph Maola, Center for Teaching Excellence at Duquesne University

Rosalie Dilbert, National Board of Professional Teaching Standards Candidate Support

Beverly Melenyzer, California University of Pennsylvania

Linda Benedetto, Pennsylvania Department of Education

Jamal Wakeem, Pennsylvania Department of Education

Survey questions were sent to panel members for examination. Content validity is determined by expert judgment (Gay, Mills & Airasian, 2006). The expert judgment for the survey was a pilot group that included successful completers of the NBC process. All members of the pilot group responded with feedback for the researcher in a focus group meeting. Changes to survey statements or the elimination of survey questions were made based on panel recommendations. The NBCTs were recommended by the Center for Teaching Excellence. They were asked to review each statement for relevancy in respect to their own motivational factors and experience with the National Board Certification process. Questions were identified as acceptable or unacceptable. For a question to remain on the survey, two out of three teachers had to deem the question acceptable. Nine questions were considered “unacceptable questions” by the panel and were omitted. These questions were considered unacceptable because they were unclear to the readers and were deemed unnecessary by the researcher in the overall survey because there were an adequate number of accepted questions the same category as the unacceptable questions. Five questions were considered unclear by the panel and were re-written with their input. Re-written questions were evaluated again by the panel and considered acceptable. The pilot group consisted of David Taylor, Lori Anthony, and Edward Roppelt. The pilot group met on November 17, 2008 in Grove City, Pennsylvania. Participants completed the survey then met with the researcher to review questions for content validity. Group members made recommendations relative to a question’s acceptability. Acceptable questions remained on the survey as they were written, unacceptable questions were omitted. Confusing questions were re-written and re-submitted to the group for acceptance.

## Measurement

A five point Likert scale with a neutral selection was preferred in this study rather than a four point scale because of its greater range and greater standard deviation significance (Gay, 2006). Questions on the survey focused on the motivating elements frequently associated with pursuing National Board Certification. Participants were asked to respond to statements about why they engaged in national board certification. The responses available to respondents were assigned the following values in order to derive numerical data; Strongly Agree = 1, Agree = 2, Neutral = 3, Disagree = 4, and Strongly Disagree = 5. Survey statements were developed through interviews with a panel of experts in National Board Certification in the region. The panel identified factors of motivation evident in successful NBC candidates. These motivating factors are represented in the survey by four categories (Table 3). The categories represented on the survey are: Professional Improvement, Recognition, Leadership, and Financial Improvement.

Table 3

*Pennsylvania National Board for Professional Teaching Standards*

*Motivation Survey by Category.*

---

**Professional Improvement (nine questions)**

Question 1. I wanted to improve my teaching skills.

Question 5. I wanted to better prepare my students.

Question 9. I wanted to measure myself against national teaching standards.

Question 13. I wanted to work with colleagues to examine and improve my teaching practice.

Question 17. I wanted to revitalize my teaching.

Question 21. The candidate support program was part of a program of study in which I was enrolled.

Question 25. I wanted to improve professionally.

Question 33. I wanted to improve student achievement in my classroom.

Question 35. I wanted to work collaboratively with other professionals.

### **Recognition (eight questions)**

- Question 2. I wanted to be recognized for my teaching.
- Question 6. I wanted to have my teaching experience validated.
- Question 10. A colleague recommended that I apply.
- Question 14. I wanted to collaborate with a colleague/s.
- Question 18. I wanted to have my teaching evaluated by a national organization.
- Question 22. I wanted to energize my teaching career.
- Question 26. I wanted to gain increased respect as a teacher.
- Question 30. I wanted to be valued in my school community.

### **Leadership (eight questions)**

- Question 3. I wanted to become a teacher leader.
- Question 7. I wanted to become an administrator.
- Question 11. An administrator recommended that I apply.
- Question 15. I wanted to prepare for a leadership role in my school.
- Question 19. I wanted to prepare for an administrative role.
- Question 23. I wanted to prepare myself to be a department chair.
- Question 27. I wanted to prepare myself to become a central office administrator.
- Question 31. I wanted to become a better curriculum writer.

### **Financial Improvement (ten questions)**

- Question 4. I wanted to take advantage of the school district financial incentives provided to National Board Certified Teachers.
- Question 8. I wanted to strengthen my resume.
- Question 12. I wanted to teach in another state and was seeking a national credential.
- Question 16. I wanted the act 48 hours associated with the certification.
- Question 20. I wanted to increase my salary.
- Question 24. I wanted to make myself more marketable as a teacher.
- Question 28. I wanted a portable teaching credential.
- Question 32. I wanted to meet the professional development mandates of the state, district or school.
- Question 34. It was part of a master's degree program.
- Question 36. It was part of a doctorate degree program.

### **Other (two question)**

- Question 29. I started with the "Take One" program.
  - Question 37. I thought the process was valuable.
-

## **Quantitative Data Analysis**

Data collected in the survey Qualtrics software was downloaded and entered into SPSS. The data was reviewed to ensure there were no errors and analysis proceeded. In consultation with Dr. David Rheinheimer, several statistical treatments were administered with the data and are described in the next sections. The Likert scale method assigned a numeric value to responses and allowed the researcher to apply statistical procedures to responses in order to numerically compare, contrast and evaluate data (Gay, 2006). In chapter four, data analysis is discussed in narrative descriptions, as well as, graphically represented in tables. Survey data was analyzed by the following statistical treatments.

### **Frequency Distributions**

A frequency distribution was completed to identify the demographic characteristics represented by study participants. Frequency distributions are appropriate statistical treatments for describing values relative to a single population (Shavelson, 1996). Demographic data analysis is used to compare the characteristics of the sample group to the overall population of teachers in the nation and the state.

### **Correlations**

Intercorrelations between selected factors were analyzed with Pearson correlation coefficients. Intercorrelation analysis is important because it identifies associations between survey factors. For instance, did respondent choices indicate an association between leadership and financial incentive? This analysis allowed the researcher to explore the interconnectedness of responses.

## **Descriptive Statistics**

Analysis of Likert scores was completed by comparing mean scores and confidence intervals of survey variables. Likert response raw means and confidence intervals were calculated and tabulated. After tabulation, values were compared to find the relationship between dependent variables. Lower mean scores illustrated a more positive influence as an initial motivating factor. Comparison of confidence interval ranges allowed the researcher to identify differences in motivating factors.

## **Analysis of Variance**

A MANOVA, or multi-variant analysis of variance, was conducted using survey data derived from the survey dependent variables. The MANOVA enabled the researcher to statistically identify variance based on multiple demographic factors and identify correlations between variables.

## **Qualitative Data Analysis**

Qualitative methods used concurrently with quantitative methods add richness to the data and allowed the researcher another lens through which to view the data (Gay, 2006). Data analysis of both data sets enabled the researcher to describe various phenomena within the study (Gay, 2006). The qualitative method selected for this study was a phone interview with 15 NBCTs. Trends in the qualitative data were reviewed and evaluated in comparison to the quantitative data derived from the surveys. Qualitative data analysis consisted of the following.

## **Constant Comparative Method**

Constant Comparative is a method of data analysis whereby data is categorized by themes (Gay, 2006). In this study, attributes such as leadership, financial incentive, professional improvement and recognition were used to initially sort and categorize response data.

## **Open Coding**

Open coding, or dividing data into segments and scrutinizing it by common characteristics (Gay, 2006), was used to find themes in the data which were different than the initial categories.

## **Axial Coding**

Axial coding is used to connect codes of common themes into categories (Gay, 2006). In this study axial coding was used to connect characteristics which were closely related.

## **Interviews of NBCTs**

National Board Certified Teachers in Pennsylvania received an online survey, previously discussed, which asked them to identify the factors associated with their application to the national board certification process. Responding NBCTs were asked to participate in a phone interview with the researcher. From the respondents who were willing to participate in a phone interview, the researcher scheduled a twenty minute interview with them at a date and time of mutual convenience. During the phone interview, a brief synopsis of the study was shared with the interviewees. The interviewer used the Telephone Interview Question Form (Appendix F) to take notes of responses during the interview. The researcher asked questions regarding the NBCTs experience in the NBC process (Appendix F). Phone interviews lasted approximately 30 minutes. The researcher noted responses to interview questions on the “Interview Questions Form” (Appendix F) and extra sheets of lined paper. After the conclusion of the phone interviews, data from the interviews was reviewed, coded and analyzed in a constant comparative analysis. Using the constant comparative analysis the researcher examined interview data line by line, compared and contrasted the data to create categories. Emergent categories were charted in excel tables and coded.

## **Interview Data Analysis**

The first step in qualitative data analysis was reading the interview notes several times prior to analysis. Responses were typed into an excel spreadsheet by the researcher. The second step in the analysis was coding the data. Codes are phrases, sentences and even paragraphs. A constant comparison method (Patton, 2002) was used and as other pieces of data were coded, they were labeled with an existing code or a new code was developed. Qualitative analysis was flexible and fluid. During the analysis, codes were changed, dropped from the analysis, combined with other codes, and new codes were added as the data was analyzed. Once codes were identified, they were grouped together to form categories. Categories explain and group together codes with a central meaning. Themes were developed from the data. The themes were analyzed from interview data and compared to the research questions to give a descriptive and detailed account of the factors of persistence evident in interview responses.

## **Ethics and Confidentiality**

Every participant in this research study has the right to privacy. The data has been and will be kept confidential at all times. The right to privacy and confidentiality was disclosed to research participants prior to the start of a study. Research participants have a right to expect trust, scientific integrity, fidelity, and expect they will not identified by name at any time, before, during, or after the study. Each participant received an email explaining privacy and ethical issues prior to completing the survey, as well as an explanation that their participation was voluntary. The completed surveys are only accessible by the researcher. At the completion of the study any paper data will be shredded, encrypted, and kept in a secure electronic format. Participants were informed that they have the option not to complete the survey.



## **Summary**

The study delves into the motivation of teachers who pursued National Board Certification in Pennsylvania and the factors which led them to successful completion of the certification. National Board Certification has been identified as a highly reflective professional development practice. Identifying and describing the relationship between reflective practice and human motivation as they relate to NBCTs in Pennsylvania will add research valuable in understanding how to better recruit and support NBC candidates. The perceived impact of NBC on teachers in Pennsylvania is examined in the study as well. Research relative to the impact of NBC in Pennsylvania is needed as there is no research on this topic in the literature pool and it has implications to those interested in the continued support of NBC in Pennsylvania. Data collected in the online survey and telephone interviews is analyzed and described in the next chapter of this study. In Chapter 5, discussion about the data analysis, conclusions and implications on professional practice are described.

## CHAPTER IV

### DATA & ANALYSIS

This study describes the factors which motivated successful National Board Certified teachers in Pennsylvania to engage in the National Board Certification process. It describes the factors of persistence which compelled them to successful completion, given the many obstacles to completing the process. It describes the perceptions NBCTs have about the impact the process had on their teaching. NBC is a reflective process. The researcher was looking for the relationship between reflective practice and factors of motivation as related to the NBC process. The study derives data which is analyzed and described in this chapter.

#### **Purpose**

National Board Certification has been attained by over 91,000 teachers, almost 2.5% of the overall public teacher force, in the US, however, Pennsylvania teachers account for less than .85% of the NBCTs nationally (NCES, 2012). This data is disconcerting because Pennsylvania teachers represent almost 2% of the overall population of teachers in the nation. If Pennsylvania were keeping pace with the national percentages of NBCTs it would have over 3,000 NBCTs in the state (NCES, 2012). The purpose of this study was to identify and describe the factors that motivated teachers in Pennsylvania to initiate the National Board Certification process. At first the purpose of the study was to solely focus on the initial motivating factors regarding Board Certification. After meeting with NBCTs in the state and talking with candidate support mentors for the NBPTS, the researcher found the more important aspect of the study was not why teachers started the process of National Board Certification, but why they persisted to complete the process. Thus, a qualitative component was developed and employed in the study to more richly explore the factors which led Pennsylvania teachers to persist to complete the process.

This descriptive study used both quantitative and qualitative methods to examine the factors of motivation and persistence present in successful NBCTs in Pennsylvania. The growing number of NBCTs nationally and the relatively low percentage of NBCTs in Pennsylvania compared to the national numbers, begs the questions of why teachers in Pennsylvania are pursuing the credential, what is pushing them to complete the process, and what are the perceived impacts of the process on teachers. The literature pool is absent of studies specific to National Board Certified teachers in Pennsylvania. This study contributes research to the literature and it has implications for policy makers who fund NBC in Pennsylvania, candidate support programs, those interested in recruiting and supporting NBCT candidates, and for NBCT candidates who are pursuing the rigorous certification.

The research questions were:

1. What motivated Pennsylvania teachers to engage in the National Board Certification process?  
  
Variables such as a financial incentive, recognition, leadership, professional improvement, gender, years of teaching experience and grade levels taught were analyzed.
2. What factors led teachers to persist to successful completion of the National Board Certification process?
3. What is the perceived impact of National Board Certification on teaching?

### **Population**

The population selected for the study included Pennsylvania teachers who successfully completed the NBC process and was conducted in 2 phases. In phase 1 the researcher met with stakeholders in the NBC process in Pennsylvania and the Mid-Atlantic region of the US to glean

an understanding of the process and to develop survey/interview questions which could be used in the research. The construction, validation and implementation of the quantitative and qualitative research tools ensued. Phase 2 was collection and analysis of the data sets. The data sets were analyzed to describe the factors of motivation and persistence present in successful completers of the NBC process in Pennsylvania.

### **Data Collection**

Data collection began in May of 2011 with the distribution of the on-line survey. The initial launching of the survey was emailed to 400 NBCTs on February 22, 2011. Responses to the survey were slow, so reminder emails were sent three additional times between February 22, 2011 and March 21, 2011. Eighty seven completed surveys were returned, or 22% of the sample group. Data from the survey was collected using open text boxes responses for demographic data, drop down pre-populated selection for demographic data, and Likert type scale for perceptual data. Data from survey responses was displayed in tables. Perceptual data responses were scaled on a Likert type scale from “strongly agree” being the lowest value and “strongly disagree” the highest value. Responses to each survey question were tallied by total number of responses, and a range of values from each question was reported as the minimum response, the maximum response, the mean, the variance and the standard deviation. Survey questions were written to understand motivational factors in these four categories; professional improvement, financial incentive, leadership and recognition, therefore data was grouped in tables by question responses which corresponded to the same category.

### **Quantitative Data Analysis**

Analysis of quantitative data included a variety of treatments. Analysis between selected survey factors was one treatment. Variables were presented using descriptive statistics.

## Frequency Distribution

Frequency distributions were used to compare demographic data between various groups within the population and are listed in Table 4. The demographic variables represented in the study are consistent with demographics present in the teaching force in Pennsylvania and the United States. Although the 2011 NBC cohort was comprised of 85% female teachers (NBPTS, 2012), nationally the teaching force is 75.9% female and 24.1% male (NCES, 2011). In Pennsylvania the teaching force is comprised of 71.4% female and 28.6% male (NCES, 2011). The respondents to this study were 77.4% female and 20.2% male. Demographic statistics from the NBPTS reports the number of years teaching for the 2011 cohort of NBCs is 9 or more years. Of the respondents in this study, 90.4% had 10 or more years of teaching experience. Most respondents were white and from schools meeting AYP goals. Sixteen percent of respondents were from under-performing schools. The literature varies relative to this subject due to an unclear, inconsistent definition of what an underachieving school. It has been reported that about 19% of NBCTs nationally are teaching in schools in the bottom third of achievement as measured by a standardized test.

Table 4

*Frequencies and Percent Compositions for Survey Independent Variables*

Variable	Frequency Counts	Percent of Total
Gender		
Female	65	77.4
Male	17	20.2
Years Teaching		

6-10	8	9.5
11+	75	90.4
Race		
Black	3	3.6
Asian	1	1.3
Caucasian	88	90.4
Grade Level		
Elem	32	37.3
MS	15	17.9
HS	32	38.1
AYP Status		
Made AYP	70	83.3
Safe Harbor	1	1.2
SI 1	4	4.8
SI2	5	6.0

---

## Correlations

To protect against type I error inflation, the Bonferroni correction was applied. This correction resulted in a level of significance of .008 for determining significant correlations ( $.05/6$ , where 6 is the number of correlations to be calculated). Table 5 illustrates the correlations between the four motivational factors embedded in the survey. The correlations show an association between three of the four categories, the exception being professional improvement. In cases when one category is answered in the affirmative, then the other

categories increased in the affirmative as well. For instance, respondents who answered affirmatively to recognition being a strong reason for applying to the national board also answered affirmatively to leadership and financial improvement being strong motivating factors. However, this is not the case in Professional Improvement. There is no association between professional improvement and financial improvement. Respondents who chose professional improvement as a strong motivating factor did so independently of financial improvement.

Table 5

*Intercorrelations Between Selected Study Survey Factors*

	Rec.	Leadership	Fin. Inc.	Prof. Imp.
Rec.	-----	.400	.336	.591
		.000	.002	.000
Leadership		-----	.408	.324
			.000	.003
Fin. Inc.			-----	.139
				.211
Prof. Imp.				-----

*Note.* Pearson correlation coefficients were used for all correlation calculations. Values below correlation coefficients represent *p*-values for the respective correlations.

### **Descriptive Statistics**

The Likert responses for initial motivation to pursue National Board Certification were assigned the following values in order to derive numerical data; Strongly Agree = 1, Agree = 2, Neutral = 3, Disagree = 4, and Strongly Disagree = 5. Scores below three indicate a positive response to the motivational factor category, and scores above three indicate negative response to the motivational factor category. The ranges of the confidence intervals for both Professional

Improvement (1.91, 2.13) and Recognition (2.18, 2.51) are both below three illustrating that the two categories are positive influences as motivational factors. Leadership (3.61, 3.94) and Financial Improvement (3.29, 3.62) have confidence intervals above three illustrating negative influences as motivational factors. Professional Improvement (2.02) is the most affirmative category of the four based it having the lowest mean score. Additionally, it is significantly different from the other three categories because its confidence interval range does not overlap the ranges of any other category.

Table 6

*Descriptive Statistics for Survey Dependent Variables*

VARIABLE	N	MEAN	SD	CI
Recognition	87	2.35	.74	(2.18, 2.51)
Leadership	87	3.78	.74	(3.61, 3.94)
Fin. Inc.	87	3.46	.74	(3.29, 3.62)
Prof. Imp.	87	2.02	.50	(1.91, 2.13)

### Analysis of Variance

Factors related to initial motivational factors are correlated, therefore, analysis of variance was conducted using a MANOVA to look at the relationship of survey dependent variables to each other. A variety of demographic data was gathered in the survey, however, not all of the data was significant due to low numbers of responses of some demographic questions. For instance, AYP status of school, race, certification area, year received NBC status had small responses which made analysis of variance invalid. However, adequate demographic



information gathered in the survey in the categories of gender, years of teaching experience, and grade levels taught did have sample sizes large enough for analysis.

In order for a factor to have an effect on the initial motivating factor it needed to have a  $p$ -Value of less than .05 to be significant. Two of the MANOVAs conducted to analyze the variance between variables are represented in Table 7. In each analysis there was no significance in the  $p$ -Values which would indicate a relationship between a variable and its impact on the motivating factor for a teacher to initiate the NBC process. In the cases of gender and years of experience, as well as those factors combined,  $p$ -Values were greater than .05. The second analysis which involved the factors of gender, grade level and those factors combined also were not significant due to  $p$ -values greater than .05.

Table 7

*MANOVA Statistics for Analysis of Survey Dependent Variables*

Main Effect	Wilk's $\Lambda$	$F$ -Value	$p$ -Value
<u>Gender and Years of Experience Analysis</u>			
Gender (G)	0.99	0.18	.95
Yrs of Teaching Exp (Y)	0.97	0.49	.74
G * Y	0.98	0.44	.78
<u>Gender and Grade Level Taught Analysis</u>			
Gender (G)	0.99	0.21	.93
Grade Level (GL)	0.93	0.70	.67
G * GL	0.92	0.74	.66

*Note.* Box's test statistic for Analysis 1 was .44; for Analysis 2 - .04.

### **Qualitative Data Collection**

Qualitative data collection began on June 22, 2011 and was completed on August 15, 2011. Data derived from 15 phone interviews provides a rich narrative of the factors of persistence evident in these successful NBCTs. Interviews varied in length due to the differences in response styles of the interviewee. Some gave very concise, succinct answers and others were very elaborate in the descriptions of their experiences in the NBC process. Interviews lasted between 15 and 45 minutes. Once completed, anecdotal documents were reviewed and analyzed using a constant comparative method.

Initial themes identified in the on-line survey were the basis for qualitative data analysis. Using a constant comparative method of data analysis (Gay, 2006), data was categorized according to characteristics of leadership, financial incentive, professional improvement and recognition. Open coding, or dividing data into segments and scrutinizing it by common characteristics (Gay, 2006), was used to find new themes in the data. For example, Paula, a multi-level elementary teacher, responded that she began the process to "become a better teacher." This response corresponded to the professional improvement category. She continued to comment about the process by saying, "it made me more reflective in what I was teaching by forcing me to look at myself on recordings." This statement started the new category of data which was labeled "reflection." Responses were written down by the researcher on the response form (Appendix F). The anecdotal notes were read and words, phrases, sentences, and paragraphs corresponding to the four categories were color coded. After color coding, same colored responses were charted on tables. Then the researcher reread anecdotal records to find new categories, which were found by identifying responses which were similar to other

individual responses, but different from the four original categories. These new themes were charted and compared to the original categories. After each piece of data was coded, then axial coding was used to connect codes of common themes into categories (Gay, 2006).

The categories listed in Table 8 are separated into two broad themes. The first theme included an initial motivation (IM). The initial motivating factor was the major reason teachers started the process. Examples, which are explained with quotes from teachers in the subsequent sections, included a promise of a salary increase once the process was complete, recognition by their school or district, becoming a better practitioner, becoming a leader in their school. These factors led teachers to the process and gave them inspiration to start, or in metaphorical terms, gave teachers enough “momentum” to acquire enough speed to lift off of the runway. Each of the NBCTs interviewed identified supports along the way which helped them to persist to successful completion. These factors of persistence (FOP) were the in-flight adjustments necessary to “straight and level” and to keep them on course. They included structured schedules, mentors, teamwork, technology, writing assistance, and support. The analogy of an airplane taking off and then flying seems illustrative of the phenomenon described in the qualitative data. A blast of energy to get the plane off of the ground was the initial motivating (IM) factor. Once the plane was at a cruising altitude, a variety of in-flight adjustments (FOP) ensued to make it to the destination and these were the supports necessary to overcome obstacles during the process and it became necessary to gain or lose altitude turbulence and different headings were necessary at times to avoid obstacles in the path. These concepts are described in the subsequent sections.

Table 8

*Themes which Emerged from Qualitative Data*

---

Improved Instruction- IM
Mentoring- FOP
Validation- IM
Leadership- IM
Money- IM
Structure time/planning- FOP
Stick-with-it-ness- FOP
Teamwork/Peer Relationships- FOP
Prestige- IM
Technology- FOP
Writing- FOP
Time- FOP
Reflection- FOP
Assessment Improvement- FOP
Increased Confidence- FOP

---

**Initial Motivation Factors**

Initial motivating factors identified by the interviewees included improved instruction, recognition, and financial incentives. Two themes emerged which differed from those identified in the quantitative survey, validation of teaching and prestige were offered as motivating factors for beginning the NBC process. The following are analyses of the categories identified as initial motivating (IM) factors for entering the NBC process.

**Financial Incentive**

Initial research during focus groups at Grove City, Pennsylvania led the researcher to believe financial incentives would have been the most important motivating factor for participating in the NBC process. In an interview with a focus group participant named Paul it was clear that a financial incentive was a strong motivating influence for him. “In my district you

get a \$500 raise if you have a PhD, but you get \$2000 if you are a National Board Certified teacher.” Many interviews conducted by the researcher during question development for the study resulted in responses related to salary increases in the form of contractual step/column movement on pay scales or district stipends for successful completion of the NBC process. Financial incentive was a category mentioned by six of the 15 interviewees. Rick said, “I wanted the salary increase negotiated by our union for the certification.” Like Rick, all six teachers who responded that some sort of financial incentive was an initial motivating factor worked in school districts which offered a monetary increase for successful completion, however, these varied considerably. “My district offered NBCTs a \$1500 stipend,” said Eleanor. George reported that his district, “gave a \$1500 raise to National Board Certified teachers.” Bonnie and Janet started the National Board Certification process because their successful completion would result in significant yearly salary increases. Bonnie said, “I started the process for the money. I could get a pay increase for completing National Board.” Janet said, “National Board Certification was a way for me to increase my annual salary. I started the process for the salary increase.” Michelle cited the column movement on her district’s pay scale as her initial motivating factor, “I was at the top step of the contract in years of service and could not go any higher, but I could move laterally across the salary columns. I had a master’s degree with lots of additional credits, but I could only increase my salary if I had a doctorate degree or National Board Certification.” Michelle worked in a district which moved successful NBCTs to the last column on the pay scale and the increase could have been as much as \$12,000 dollars in one year depending on the number of years the teacher has been teaching.

### **Validation, Prestige, Recognition**

Validation of teaching as a respected career was the initial motivation for some teachers interviewed. “I wanted to bring some respect to my profession as a kindergarten teacher,” said Jen. She is a career kindergarten teacher and didn’t think early childhood educators garner the same respect as teachers in upper levels. “Nobody saw my teaching as valuable. I felt like people looked at us (kindergarten teachers) like day care providers. We were doing really great things with 5 year old kids, teaching them how to read and how to behave. I wanted people to see the teaching practices we were using and to respect us.” Tanya is another early childhood educator with experience in grade K through grade two. She wanted, “to validate my teaching on a national level.” She, like many teachers interviewed in NBC focus groups conducted by the researcher saw a need for more respect for the teaching profession, and Tanya viewed achievement of National Board Certification as a way to validate her teaching skills. Statements like these were evident in over a third of the responses. Six of the NBCTs interviewed made reference to an initial motivating factor being a need to feel validated in their teaching. Respondents were attracted to Board Certification because their teaching skill would be measured against national standards and their work would be validated by a nationally recognized organization.

While only three respondents made reference to prestige, they felt that National Board Certification was a way to acquire some status for their work as a teacher. Linda said, “I wanted to have a national certification to be considered the best in my field. I felt it was the only way to achieve being the best.” Along with the financial incentive, Michelle was looking for some prestige in the certification. “I wanted to be considered the best and I think being ‘board certified’ means you are a better teacher than those who are not.” Closely related to validation

and prestige was recognition. Sonya was very disappointed that her school did nothing to recognize her accomplishment of successful attainment of NBC, “I didn’t have any support from my district. They never even acknowledged that I got the certification. I know teachers in other schools who got increased salaries, awards at board meetings or faculty meetings, my school did nothing. It is a lot of work and should be recognized.”

### **Professional Improvement**

Professional improvement was the most intriguing category for the researcher. Four of the NBCTs interviewed cited professional improvement as a strong motivating factor for their decision to engage in the NBC process. It became evident in the phone interviews that professional improvement was the strongest factor. Responses to interview question three, “Did your motivation for completing the NBC change during the process?” and to interview question four, “Did you change during the NBC process?” teachers unanimously responded to professional improvement becoming a factor for them sticking with the NBC process. The quantitative survey data, which identifies professional improvement as the strongest factor for initially motivating teachers to begin the NBC process, contradicts the qualitative data from interviews. Professional improvement was not identified as strong a motivating factor in the qualitative data as it was in the quantitative data, however, four NBCTs responded that it was a factor for them. Faith, a high school teacher with 15 years experience expressed her initial motivating factor was because, “I wanted to be a better teacher.” She felt complacent in her position as a science teacher and wanted to grow from the NBC experience. “I felt like I could not connect like I used to and needed to become more attune with their [students’] needs in my classroom. I felt like I was teaching the same thing every year and they weren’t getting it as much. I wanted to start teaching in a new way.” Two NBCTs, Paula, an elementary and middle

school teacher, and Debbie, an 8<sup>th</sup> grade social studies teacher responded, “I wanted to grow professionally.” Paula said that she was looking for professional development which would impact her teaching and that the NBC process made her a more “reflective” teacher meaning she thought about her teaching more and made adjustments based on analysis of student response to her teaching. She felt the professional development being provided by her school focused on generic procedural needs of the school, i.e. new student management systems, procedures for handling grades and clerical work. She didn’t feel it was helping her become a better teacher, but she saw the enthusiasm expressed by a colleague who had completed the process the previous year and she talked a peer into joining her to complete the process. Debbie was talked into the process by her principal. “One day we were talking. I was thinking about taking some courses because I was feeling frustrated and burned out. She told me about National Board Certification, she was a strong proponent and felt it would be good professional development for me.” A group of teachers from Debbie’s school applied for and completed the process together. Sonya, an 8<sup>th</sup> grade teacher said, “I wanted to challenge myself professionally.” She had been teaching middle school students for almost two decades. “I was in a routine of teaching. I felt like I was teaching the same thing over and over again, but not really analyzing students’ growth nor was I reflecting on my teaching very much. I was using old lesson plans and activities to plan for current classes and it didn’t feel very fresh.” The feeling that her teaching had stagnated and the hope that NBC process would challenge her to grow professionally motivated her to begin the process.

After analyzing qualitative data, initial motivating factors for beginning the NBC process can be summarized into three categories. Teachers in this study began the process for financial incentive, validation of their teaching or for professional improvement. This data is consistent



with quantitative data derived from the study. Similarly, as in the quantitative data where leadership was the lowest factor for initiating the NBC process leadership is absent from the qualitative data. No NBCT identified leadership opportunities as a factor for their entrance into the process. The three categories of initial motivation for NBC process form a baseline of data which allows the comparison of factors which NBCTs identified as reasons they completed the process. These three categories are the basis for the axial coding of interview data and are further described in the following sections.

### **Perceived Impact on Teaching**

All 15 teachers interviewed in this study reported the NBC process having a positive impact on their teaching. Although the study was not designed to measure this impact, there is data derived from the interviews which identify how the National Board Certification process impacted their teaching practice which directly answers research question three. An assumption of this study is that teachers meeting the requirements of the core propositions of the NBPTS are accomplished teachers. Central to the mission of the NBPTS is to certificate accomplished teaching as defined by the organization for each of its 24 certification areas. The standards for each certificate area are based on the Five Core Propositions. The Five core Propositions of the NBPTS are:

1. Teachers are committed to students and their learning.
2. Teachers know the subjects they teach and how to teach those subjects to students.
3. Teachers are responsible for managing and monitoring student learning.
4. Teachers think systematically about their practice and learn from experience.
5. Teachers are members of learning communities.

The following data connects teachers' perceptions about changes in their instructional practice to the several of the Five Core Propositions.

Proposition one of the NBPTS states that: Teachers are committed to students and their learning. When responding to how she changed in the NBC process Janet reported that, "I am very in tune to meeting the needs of every student in my class and their learning styles. Prior to becoming a NBC I taught to one learning style. Now when I plan lessons I try to incorporate several learning styles into my lesson. I also keep track of how often I use various styles. If I see I am lecturing too much I make sure to add another teaching mode to my next lesson." This response indicates an understanding of the description under proposition one which states, "NBCTs are dedicated to making knowledge accessible to all students, they believe all students can learn, they treat students equitably, they recognize the individual differences that distinguish their students from one another and they take account for these differences in their practice." Eleanor responded that the NBC process made her, "better at differentiating instruction." She indicated that she uses pre-tests in each unit she teaches and gives students different lessons based on their individual needs. Valerie expressed that she changed in the NBC process in that, "the NB Certification process was unequivocally the most powerful professional development I have experienced. Why? Because the process demanded that I look at three areas in their practice: I look at students' response to my instruction, I look at the NBPTS standards I've addressed and I look at my teaching. No other professional development I have undertaken has demanded me to look at my practice through those three areas."

Proposition two states: teachers know the subjects they teach and how to teach those subjects to students. Paula expressed an increase in confidence in herself as a teacher after the NBC process because, "I am more student-need focused. I knew the curriculum very well

before, but not the students. Now I look through assessments of their reading ability and I measure my success in teaching based on their growth in ability.” Faith echoed Paula’s response, “The NBPTS certification process reinforced in my mind the importance of reflection on students abilities and refinement in my teaching based on their needs. The practice of reflection has allowed me to see where I have succeeded, where my students have succeeded, and where we need both need improvement.” This connects to the sub-statements of proposition two as well in which “NBCTs are able to use diverse instructional strategies to teach for understanding, they use multiple methods for measuring student growth and understanding, and they can clearly explain student performance to parents.”

Proposition three states: Teachers are responsible for managing and monitoring student learning. Both Eleanor and Valerie’s responses about differentiating instruction via assessing students and looking at student responses to instruction connected to subsections of proposition three which states that, “NBCTs know how to assess the progress of individual students as well as the class as a whole.” Debbie’s response connected to this proposition as well, “I am much more focused on student learning outcomes then I was before. Everything I do now goes through the filter of- but how does or would this impact my students' learning? I design an assessment of student learning for everything I teach, not for assigning a grade, but to check for [student] understanding.”

Proposition four requires teachers to think systematically about their practice and to learn from experience. Elements of proposition four were evident in Michelle’s response when she said, “The NBTS process allowed me to think about my lessons, pick out what went well and what could be improved on. It has also made me think about and carefully plan my lessons so that they reflect best practices in teaching.” Michelle had to find what the educational

community was calling “best practices” in order to, what the NBPTS states in subsections of proposition four, “to stay abreast of current issues in American education and to critically examine their practice on a regular basis to deepen knowledge, to expand their repertoire of skills, and to incorporate new findings into their practice.” This teaching behavior also meets the standard under proposition four which requires, “NBCTs to model what it means to be an educated person – they read, they question, they create and they are willing to try new things.” Michelle’s statements were not the only statements which connected to this subsection. Bonnie said, “It [the NBC process] has helped me to clarify what standards are considered important in my profession and caused me to reflect about my personal knowledge and experience as an educator as compared to a 'national' standard of achievement.” Rick’s summary of a change in his teaching practice also illustrates a connection to proposition four. He said, “It has given me a broader perspective of my teaching. I research and seek best teaching practices and do not follow the current whims!” Tanya reflected ideas which connect to proposition four when she said, “I am more confident to try new ideas in the classroom, because I look for and learn new strategies to incorporate, but only after understanding the benefits for my students. I feel like I need to be able to justify why I’m using a teaching strategy to parents.”

Student focused teaching was a major theme in teacher responses reflecting how they changed through the NBC process. Proposition one through four all have subsections related to teachers using an understanding of students to guide instruction. An example of this is in how the NBC process changed Sonya in that it, “caused me to re-evaluate how I teach material and how my students achieve based on my teaching approaches. I can now see that some students do better based on my teaching strategy than other students. I feel like it is my job to find a strategy for each of my students.” George now connects student learning to his instruction as well, “I

have become more reflective in my practice and I measure everything I do according to the impact it has on student learning. I assess student learning every day.” Ron connected his change in teaching to elements of proposition four as well, “The [NBPTS] standards for teaching were well written; therefore, they reinforced the practice of looking at student assessments in my class. The focus on showing that my teaching has an impact on student learning is a one that I carry forward into virtually all aspects of lesson planning and instruction.” Linda expressed a, “better and deeper self-reflection on teaching, an awareness of student needs and more ways to evaluate of student learning.” Tara said that, “The process has helped me to become a reflective practitioner. I am better able to explain what I do and why I do it in the classroom. The choices that I make are choices to impact student learning.”

Proposition 5 states: teachers are members of learning communities. There were several examples of teachers working in learning communities from the interview data. Bonnie worked with a cohort of teachers who were completing the certification at the same time. She said, “Do it with a buddy. Make sure you have someone to bounce ideas off of who is going through the process too. This was the best part. Having a group working on it together and talking about it.” Michelle also worked with a cohort of teachers, “Teamwork was so important. Could have not done it alone. We read rubrics together and reviewed answer to the questions, and it helped being pushed by each other.” Janet’s statement echoed Michelle’s, “The group working together helped so much. We really pushed each other.” Janet added, “The conversations about what we were doing in our classrooms were great. We learned a lot from each other.” Tara, Paula, Debbie and Eleanor all also made reference to meetings with colleagues as part of the NBC process as important to the process.

The previous examples illustrate changes in teaching practice as a result of the NBC process. The aforementioned teachers reported changing in ways which enhanced their ability to teach.

### **Factors of Persistence**

Research question two relates to why teachers persisted to complete the process and is more complex than question one and more difficult to answer concisely. The factors which led teachers to persist to the successful completion of the NBC process are numerous and teachers needed support at various times depending on the nature of the obstacle they were facing. The individual, situational nature of the supports necessary makes it difficult to generalize factors to the sample group. Each story has a different set of personal circumstances, for instance, Rick said, “I could not have done it without a mentor.” Yet Linda did not have a mentor and felt like, “I completed the process on my own.” So, in one case mentoring was identified as a strong factor to successful completion of the process, while mentoring is absent in other cases.

Once the application process was completed and teachers began the work associated with National Board Certification there were many challenges. Valerie said, “The process is time consuming, requires focus and can be easily set aside for other endeavors.” Discussed in the next sections, in nine cases the initial motivating force was not enough for teachers to maintain the level of commitment necessary to complete the portfolio, study for the assessment center exams and meet the deadline to have the assessment box complete. These lulls in initial motivation, and in some cases complete extinguishment of that force which got them into the National Board Certification process, added to the challenge. Teachers identified various factors of persistence which helped them overcome challenges along the way, and pushed them to complete the certification. These factors are mentoring, collaboration with peers, and structured

time schedules. These factors are the in-flight adjustments which kept the teachers on course once the plane was in the air and they are expanded in the subsequent sections.

### **Mentoring**

Mentoring was identified by over half of the teachers interviewed as a factor which led them to successful completion of the NBC process. The mentors provided technical assistance in showing teachers how to work through the process. The writing involved is very specific to reflect on a teacher's classroom instruction compared to standards, and it was not always clear to teachers what the assessment questions were asking. Debbie identified having a mentor as a vital element in her success, "There were many times I was lost and my mentor provided me a framework to guide me through. I needed to be sure I was answering the right questions and she read my responses and guided me." Paula said, "The process was not always clear. I wasn't sure, in the beginning, how to do it video record my lessons." The mentor knew how to submit videos, how to set up equipment, how to avoid mistakes in recording video, which video to keep and which ones to get rid of." The mentor's successful experience in the process gave her a trusted support and the teacher felt this experience was valuable to her as they worked on video production. Tanya needed a mentor because, "The mentor knew we had to keep working at a steady pace. She set up meetings and gave us short term deadlines to meet. This really helped me stay focused and working." Rick said, "I could not have done it without a mentor. She pushed me to keep me going when I felt like giving up." Those identifying mentors as a factor which helped them succeed noted a special relationship which developed between themselves and the mentor. "I did not want to let her down. I felt like I had to keep working because she was dedicating her time to me and I wanted to do it for her." "She pushed me. She really kept me going when I didn't feel like writing. I would convince myself not to work on some night,

then I would think about that deadline my mentor gave me and I would write. It wasn't easy. There were a lot of things I would have rather done."

### **Teamwork/Peers**

When asked what advice she would give someone just starting the NBC process Michelle said empathically, "don't do it alone." Working with a team or peer was a factor identified by ten of the interview respondents as essential to their success. She continued, "Get a buddy to bounce ideas off of and to read your writing." Daily interactions with peers going through the process together helped Bonnie stay motivated, provided a sounding board and the team members became resources for each other. Paula also identified her peer relationship as one of the factors which led her to persist to successful completion, "having a colleague going through the process at same time was big help." Faith did not think it would have been possible for her to finish if not for her work with a peer. "Do it with another teacher. It is nice to have someone to push you and to talk to. Someone going through what you are going through and understands it, having someone with you is important." "I was part of a team of educators working together to finish the process," said Debbie. Like Faith, she credits the team working together for her success. Debbie's advice to others attempting the process is to, "Find a mentor and a group of peers to work with. It was invaluable to have others going through the process with me."

### **Structured Time**

The process takes time. Over 400 hours for some candidates and the time spent working on NBC can be frustrating. "Putting it all together in the portfolio, figuring out what the NBPTS was looking for in my responses. All the technical stuff, burning CD's and taping, it all took a long time to learn and to put together." According to Paula, she had to schedule time on her calendar in order to meet the time constraints of her professional life, family and the demands of



the NBC process. All 15 respondents mentioned time as an obstacle to completing the NBC process. Eight of the 15 mentioned structuring time to work on assessment materials as a strategy which was necessary to their success. When asked what advice she would give someone just beginning the process Sonya said, “structure your time, don’t take time off.” It was also necessary for her to make time in her busy calendar to ensure that she had time to work on her submissions. “I eventually used all day on Saturdays to work on NBC.” Bonnie also had to schedule time on her calendar to work on NBC. A third grade teacher, Bonnie wasted a lot of time in the beginning because she didn’t know what to do, but once her mentor helped her understand what she needed to do, then she needed to, “organize the time I had to spend on NBC. I would make lists and check off tasks like, get the camera, practice setting it up and learning how to use it so I didn’t waste class time or lose good video. Organizing my time really helped.”

### **Motivational Changes**

Here lies the true meaning behind this study. Initial research into why teachers embarked upon the NBC journey sparked two more questions. What made teachers finish the certification process and did their motivation change from beginning to end. The quantitative survey, designed to measure why teachers started the process could not answer these questions. The survey was necessary to delve into initial motivational factors, however, more information was necessary to understand if there were changes in individual motivation during the process and what really pushed teachers to successful completion. The following sections describe the changes in motivation for teachers involved in the study.

### **Factors of Persistence**

The National Board Certification process can take up to three years to complete (NBPTS, 2007). Teachers, working full time jobs, are required to complete an assessment portfolio which may involve up to 400 hours of time outside of the classroom/school day (NBPTS, 2007). Teachers must prepare for six, 30-minute assessment center exercises (6 hours total) to measure related area content knowledge (NBPTS, 2012). Pressures of their teaching jobs, family life, coupled with the rigor of the process and technical issues, all impact a teacher's ability to persist to successful completion and 60% of applicants fail to achieve National Board Certification in their initial attempt (NBPTS, 2007).

Twelve of the 15 teachers interviewed, 80%, reported a change in motivation during the process. This data confirms findings of the researcher that the initial motivating factor was not the reason most teachers completed the NBC process. Several factors are presented here which were evident in responses to interview question number two (What were the factors which led you to complete the certification process?) like mentoring and team/peer help. However, new categories emerge from the data at this point. Teachers begin responding that they started to change during the process, and that change kept them going. Reflective practice, becoming better assessors of student work, and an increased confidence in teaching abilities were all cited. However, another characteristic emerged here, stubbornness, a characteristic the researcher calls "stick-to-it-ness."

### **Stick-to-it-ness**

Twelve of the 15 respondents had answers which fit into this category, a quality which emerged through the process. This quality can be described as stubbornness born from a desire to finish, a refusal to quit. Sonya said, "I am not a very stubborn person, but with this I became

stubborn. I knew I wouldn't quit. I wouldn't let myself even think about quitting. I was afraid to let those thoughts enter my mind so I focused on finishing." She continued, "I didn't have any support from my district, they never even acknowledged that I got the certification in the end, but really I didn't think it was up to them to support me. You have to do it on your own. In the end it is only up to you to finish and I decided I would not quit. My persistence paid off."

Conversely, thoughts of quitting were part of the process for George. "I thought about quitting several times. It gets overwhelming and I felt like I could not do it many times. But being stubborn was an asset. You need to be stubborn in that you won't stop working. It is a lot of work." He continues by saying, "I knew there would be a lot of personal satisfaction when it was done." Bonnie thought about quitting after a very disappointing event, "I just finished a submission which was really hard. I had a hard time getting good video and writing about it was more difficult on this one. Then I accidentally erased the video and had to start over. I wanted to quit. I was so upset. I had so much time into this submission." When asked why she didn't quit she responded, "because I had so much time in the process. I felt like I had invested so much time already and I didn't want to waste the time spent by quitting. If this happened in an earlier submission I may have quit, but I got to a point when there was just so much time in it that I couldn't quit. I wouldn't let myself quit." Michelle had a similar perspective, "once I got going in it just finishing became the motivation. The other reasons, the reasons I started with like salary increases and getting some recognition for my teaching didn't seem to matter anymore. I just wanted to finish."

### **Moving from Financial Incentives**

Conventional wisdom would be that paying someone more money for accomplishing something would entice them to successful completion. It seems to follow certain logic that

people will do more if they get paid more, and in six of the 15 interviews conducted for this research that was exactly the case. However, all but one case where a teacher identified salary increases or financial incentives as an initial motivating factor changed during the process. George was the one exception in this group. There were six teachers who identified Financial Incentives as an initial motivating factor and five of them said that their motivation for completing the process changed, but not George. “My motivation did not really change. I was motivated by the salary increase through the whole process.” In the other five cases where financial incentive was the compelling force to begin the process the motivation changed along the way. Bonnie’s motivation changed from the district salary column and step advancement which translated into \$2000 a year increase to, “once I got started I wanted to see my hard work through. I didn’t really think about the money anymore.” According to Michelle, “I wanted the prestige and money associated with the certification at first, but that didn’t matter once I got started in the process. My will changed and I wanted to finish.” Janet said, “I started because of salary but finished because it was beneficial. [The] process became my motivation, changing teaching made me reach farther.” The money was an initial motivating factor for Eleanor as well, but “the process changed how I look at teaching and how I teach. It was more important than the money.” Rick worked in a district which had a contract salary increase for those attaining NBC and he wanted the salary increase initially, “then I started to change and started to become a better teacher. This was more valuable than the salary increase.” When Ron was asked why he started the NBC process he quickly answered, “for the money.” He also worked in a district which compensated NBCTs for their accomplishment. His motivation changed, the money became unimportant. Finishing it became important. It is really like a marathon. Once you start and invest so much time, you want to finish. You have too much invested to quit.”

### **Other Changes from Initial Motivation Factors**

Financial incentive was a factor identified by six teachers interviewed in the study. Validation of teaching experience, recognition for their work as a teacher and a perceived prestige from completing the rigorous certification were motivating factors for other teachers. This section looks at these factors and how important they were to the overall success of teachers who selected them.

In the focus groups used to facilitate discussion with NBCTs in Pennsylvania the teachers talked about a lack of prestige in teaching. Teachers believed they were not respected as professionals. They saw NBC as a mechanism to bring more respect to the profession of teaching. This was also a founding element in the mission of the NBPTS, after all it was established in part to develop standards which reflect high-quality teaching and design a measurement system to evaluate teachers based on those standards (Carnegie Forum, 1986). At its core the NBC process was established to identify good teaching, measure teachers against those standards and then recognize those teachers who measured up. After the focus groups it was clear that teachers were still looking to NBC as a way to garner recognition. Three teachers of the 15 interviewed in the study identified factors related to recognition, prestige or validation of their teaching. “I wanted to be viewed as one of the best in my field,” said Linda. She continues, “I saw National Board Certification was the only way to do it.” Her initial motivating factor was not the reason she completed the certification though, “I became a dramatically better teacher through the National Board. My teaching was so much better after going through National Board. I wasn’t looking for validation anymore, I wasn’t as good when I started and that teaching should not have been validated or viewed as the best in my field, but now I will put my skills at assessing student learning and understanding how to design instruction for 9<sup>th</sup>

graders against anyone's." "Once I started the program my motivation changed. I started off for the prestige, salary and for the challenge. Then I started to see how it was changing the way I taught. I was reflecting on teaching standards and examining my teaching. It really changed the way I thought about teaching. I started using student assessments to develop lessons. I became much more critical of my teaching (Michelle)."

In one case a teacher responded that her initial motivating factor was to become a better teacher. And she felt that the process helped her become a better teacher, however, she reported a shift in motivation after starting the National Board. Faith started the process hoping to become a better teacher, "I was excited about becoming a better teacher, but I started to change and those changes kept me interested and working. I really think the changes in me, not necessarily becoming a better teacher were the real reasons I finished."

### **Transformational Change**

The literature describing the effectiveness of National Board Certification is mixed in its support of NBC. There are many aspects of National Board which are identified as negative, i.e. it's costs, it is an "insiders" organization comprised of and regulated by educators, it is racially or economically unfair. Those aspects are important, but not explored in this study. However, one debate in the NBC literature is answered by the results of the qualitative interviews in this study. That debate is; Does NBC recognize accomplished teachers or does it make teachers better? All 15, 100% of interviewees, answered this question the same way. They all felt that the NBC process made them better teachers. For the first time in their careers teachers had an opportunity to look at good teaching defined by standards, and that process changed them. Janet said, "The standards for teaching were well written; therefore, they reinforced practice. The focus on demonstrating evidence of impact on student learning is a one that I carry forward into virtually

all aspects of lesson planning and instruction.” Sonya has become, “...more thoughtful about teaching now. I can really assess where kids are in their understanding of something and I understand how to help them.” According to Ron, “I have a much bigger impact on student learning than I thought I did. I am much more reflective about my role in their learning.” Michelle had strong feelings about the process, she said, “It was the most worthy professional development I have ever done. Hardest thing I’ve done but worth it. I was a good teacher, I am now an awesome one. It is because of NBCT. I have earned many awards and recognitions (including PA teacher of year finalist) and am doing unique and challenging things with my students because of the process.” Debbie stated that, “I am a better assessor of student work. I can find an appropriate level for them to be working on and I am better at challenging them.” Paula is, “...much more mapped out and deliberate with my teaching to ensure fairness and equity.” Tanya said, “I am more confident and have become a leader with other teachers. They seek my advice in the classroom.” Linda reports, “My confidence as a teacher grew during the process and I became a better teacher. My practice improved dramatically.” Rick said, “I became more thoughtful about why I do what I do in the classroom.” And Faith simply said, “I am a more reflective teacher.”

The data derived from qualitative interviews strongly and unanimously suggest that a transformation took place with each of the 15 NBCTs interviewed. Initial motivation for beginning the process was different for all but one NBCT, however all NBCTs reported becoming better teachers because of the process.

### **Summary**

This study was designed to identify factors of initial motivation and persistence to complete the NBC process. Comparing these characteristics led to an understanding of

motivational changes in NBCTs as they completed the NBC process. It further describes NBCTs' perceptions of the impact the process had on their teaching. The data derived by the study can be described by categories of initial motivating factors, factors of persistence and motivational changes. Quantitative initial motivating factors included financial incentives, leadership, professional improvement and validation of teaching. Qualitative initial motivating factors included improved instruction, validation, financial improvement and prestige. Interviews expanded the study to include data which described factors of persistence; mentoring, structure time/planning, teamwork/peer relationships, technology, and writing. Interviews with NBCTs also derived factors which can be described as motivational changes and include; stick-with-it-ness, reflection, assessment improvement, and increased confidence.

Analysis of data from the on-line survey and telephone interviews was described in the chapter. Survey data suggests that the strongest motivating factor for teachers to enter into the national board certification process was professional improvement. Although factors of financial incentive, recognition, and leadership were evident in survey responses, there is no statistical evidence from this study to suggest that teachers were applying because of any of those factors alone. Similarly, professional improvement was identified as an initial motivating factor by one third of NBCTs interviewed. Another third identified their initial motivating factor to be financial incentive. The remaining third varied in response from validation and prestige. From the two data sets, professional improvement was the strongest initial motivating factor. Next the study examined data relative to factors of persistence. There was no consensus of factors of persistence among interview responses. However, there was consensus from the interview group that the NBC process made them a better teacher in some way.



The analysis of data in this study leads to some compelling discussion about NBCTs in Pennsylvania. The initial motivating factors, factors of persistence, and perceived impact of the certification on teaching practice are described in detail in the next chapter.

## CHAPTER V

### CONCLUSIONS, SUMMARY & RECOMMENDATIONS

Since 1987 over 91,000 teachers have become National Board Certified Teachers (NBPTS, 2011). The inception of the NBC process came from a call for America's educational systems, specifically those charged with instructing America's youth, to improve (Carnegie Forum, 1986). Improving the nation's teaching force has been long debated among politicians, educators, teachers unions and parent groups. Communities in the United States are diverse and complex. Schools, which are microcosms of communities, are equally complex. It would be naïve to think that a nation's educational system could be improved by one universal intervention. Yet time and time again interventions designed to improve teaching and learning have focused on standardized curriculum or standardized programs which do not regard individual characteristics of the communities which are being served. There is little consensus in the literature pool with regard to a solution. However, it is generally agreed that teachers matter most in the process of student learning. One option is the National Board Certification process, which specifically focuses on teaching and the related learning. While the organization and process are not without criticism and debate, it is viewed generally as a positive process. There has been much discussion related to NBC implementation. Questions about financial issues with its implementation and with systems of compensation for its attainment abound. The political and related financial issues explain why there is not more parity in the numbers of NBCTs in each state. Recently, Pennsylvania has seen a large increase in the percentage of teachers who apply for and become NBCTs. Nevertheless, the overall number of NBCTs in the state is low compared to many other states and the national number of NBCTs.

This mix-method study was designed to examine the factors which led Pennsylvania teachers to begin the NBC process. Further exploration into the factors which led them to successful completion and what changes in their motivation took place along the way were also part of the study design and purpose. Quantitative data was derived from an online survey distributed to 400 NBCTs in Pennsylvania. Eighty-seven NBCTs responded to the survey. Of the 87 respondents, 57 agreed to participate in a phone interview with the researcher to delve more deeply into initial motivating factors, and to examine factors of persistence, as well as, changes in motivation during the process. Fifteen of the 57 respondents were randomly selected and interviewed. These survey and interview responses provided valuable data to answer the study's research questions. The research questions are:

1. What motivated Pennsylvania teachers to engage in the National Board Certification process?

Variables such as a financial incentive, recognition, leadership, professional improvement, gender, years of teaching experience and grade levels taught were analyzed.

2. What factors led teachers to persist to successful completion of the National Board Certification process?
3. What is the perceived impact of National Board Certification on teaching?

The results and a discussion of the research questions are presented in this chapter, followed by final conclusions, limitations, implications for practice, and the chapter concludes with recommendations for further research and a summary.

## **Summary of Results**

The study focused on teachers who successfully achieved National Board Certification in Pennsylvania. At the time of data collection in 2009 there were 470 NBCTs in Pennsylvania. The researcher acquired contact information for 400 of the 470 NBCTs in Pennsylvania at the time. Each PA NBCT was emailed an online survey and 87 (or 22%) responded to the survey. Survey data was analyzed and the following are conclusions from the quantitative survey data.

- NBCTs in the study group were motivated to begin the NBC process because of a desire to improve professionally.
- NBCTs in the study group did not engage in the NBC process because of a desire to be in a leadership position.
- Responses from NBCTs who began the NBC process because of professional improvement did not show an association with financial improvement as an initial motivating factor.

After the completion of online surveys, PA NBCTs were asked if they would be willing to participate in a telephone interview with the researcher. Of the 87 survey respondents, 57 agreed to participate in a phone interview. Fifteen PA NBCTs were randomly selected for phone interviews. Interview questions were asked and responses noted by the researcher. Interview data was analyzed using open coding and constant comparative methods. The following are conclusions from qualitative interview data.

- Four NBCTs (26.66%) were initially motivated to begin the process by professional improvement.
- Six NBCTs (40%) interviewed were initially motivated to begin the process by financial incentive.

- Five NBCTs (33.33%) interviewed were initially motivated to begin the process by validation of their teaching or the prestige of the accomplishment.

Initial motivational factors for teachers differed and these differences are illustrated by the three categories listed. Interview data was different from the survey data in regard to initial motivating factors as well. The strongest motivating influence from the survey data was professional improvement based on the category having the lowest mean score on the Likert scale of (2.02), the most affirmative category of the four. Additionally, it is significantly different from the other three categories because its confidence interval range does not overlap the ranges of any other category. Only 26.66% of NBCTS in interviews reported beginning the process for professional improvement. The interviews show three categories of initial motivational factors as reported in the previous bullet points.

Qualitative data relative to factors of persistence were also collected from interviews with NBCTs. These factors helped NBCTs overcome obstacles as they went through the certification process. Implications of these factors are explored later in this chapter. Factors of persistence were the following:

- Mentoring
- Structuring time
- Technical assistance
- Peer relationships/Teamwork

Initial motivational factors and factors of persistence are important findings in the study. However, the more important aspect of the study was found by looking at the changes in motivational factors which were derived by reviewing the initial motivational factors, factors of persistence and the overall factors which compelled teachers to complete the process.

The results suggest several areas for consideration. The literature pool is full of questions about the NBC professional development model. NBC is relatively expensive and rigorous compared to other professional development “programs.” A recurring question is whether the NBC process identifies, or is the signal of, accomplished teaching, or does it create accomplished teaching through the process. The unanimous consent of the teachers interviewed in this study was that it is great professional development. It forced teachers to take a reflective and critical look at their teaching. Aspects of NBC as professional development are expanded in subsequent sections. However, as a matter of introduction, it is pertinent to discuss some aspects of professional improvement here.

### **Professional Benefits of NBC**

For the first time in their careers, teachers applying for NBC had to reflect upon “industry standards.” These standards for what is considered good teaching were initially derived from the Carnegie Forum and have been further developed by the NBPTS. The certification process asks teachers to measure their teaching against those standards. In this study, teachers unanimously considered NBC a rigorous process which facilitated a better understanding of the needs of their students. The literature about NBC cites various reasons why NBC is a valuable process. The reasons include 1. an increase in teachers’ use of reflective practice, 2. teachers become better assessors of student work, 3. better attendance rates for NBC teachers, and 4. better development of teachers who will become educational leaders.

### **Mentors as Leaders**

Leadership is a factor often cited in the literature as a reason teachers participate in the NBC process. In fact, one of the initial reasons for the Carnegie Forum and the inception of NBPTS was to give teachers a voice in the educational change movement. This aspect was not evident as

a motivating factor for teachers in this study. In both qualitative and quantitative data sets, the teachers involved in this study did not aspire to be in leadership positions, nor did they engage in the process to become principals or positional leaders. However, one of the impacts the process had on teachers was to create a perception by other teachers that they (NBCTs) were experts. Some became authentic leaders in their schools after the process and almost all of the NBCTs involved in the process cited having a mentor, a perceived expert, as a source of strength during the process. The mentors were NBCTs and in the process of mentoring other NBCTs they exhibited leadership skills in building positive relationships with candidates, setting appropriate expectations for meetings, setting deadlines for work submission and holding mentees accountable for work. The NBC process did create some leaders in the end. Eighty percent of the NBCTs interviewed cited a positive aspect of having a mentor or friend to go through the process. Pairs, cohorts in mentor groups seem to have a positive impact on the success of the process and on the quality of the process.

### **Final Conclusions**

National board certification can be described as a transformational process for the 15 NBCTs interviewed in the study. In 14 out of 15 cases the reason a teacher began the process was not the reason they reported completing the process. In only one case did the motivation stay the same from beginning to end. Each teacher reported changing as they went through the certification process. These motivational changes illustrate the transformational nature of the NBC process.

### **Transformational Process**

Narrative perceptual data was crucial in painting the picture of motivational factors for NBCTs in PA. The compilation and analysis of this data from the survey and from interviews

indicates that the process changed the way successful NBCTs worked. Over 73% of the survey respondents cited changes in their professional practice after completing the certification and 100% of the NBCTs interviewed reported changes in their teaching. Although the study was not designed to measure changes in educational practice, nor was it designed to quantify those changes, it is important to note that unanticipated findings were uncovered. Changes in professional understanding of teachers, improvement in some element of professional practice, and feelings of success in the classroom kept NBCTs going through the process. The transformation they experienced was significant and it changed the motivation from external factors, like money and recognition, to an intrinsic desire to change and become better. Transformational means to change the form, not just rearrange it. Teacher professional development often focuses on adapting something to fit a new situation, but true transformation, like a caterpillar changing into a butterfly, means changing your form as an educator. The 15 NBCTs interviewed in the study were transformed. They looked at their profession and they looked at themselves differently after becoming NBC certified. The process facilitated a metamorphosis.

NBC can be compared to a lifestyle change like changing one's eating habits. Changing one's diet for the long term can be a very rigorous process. It requires a change in the way you approach food and perhaps exercise in your life. It requires a transformation from old habits of lifestyle to new practices. At first the process seems difficult and progress is slow. Then, when changes finally begin to be seen in the numbers on the scale, or to a greater extent, you see or feel a change in their body, the process becomes less arduous. Your pants fit a little more comfortably, you notice a slimmer look in the mirror, someone comments on the way you look. The new regime becomes a bit easier. One's desire to change comes to fruition and it becomes



less challenging to push away food or to pass on dessert. It begins to feel bad if one skips a workout. A transformation takes place as a result of the new eating/exercise regime becoming a part of everyday your lifestyle. This is an analogy to what took place with NBCTs in this study. As they continued the certification process they began to notice changes in the way they taught, assessed students, reflected on their lessons and made changes in their lesson design and implementation. They transformed and the motivation to continue transforming was reinforced by the changes they were experiencing, just like you changing your lifestyle, transforming mentally from the physical changes in your body.

Reflecting on some aspect of life is a first step in changing. Many theorists have explored reflectivity as a means to change and become a better practitioner. As described in chapter two of this study, Shon's theories of reflection-on-action and reflection-in-action are pertinent to this study as NBC is a highly reflective process. Professional practice changes as a practitioner reflects after completing some task, or in the case of a teacher reviewing a video recording of a lesson and then writing about the lesson. As a practitioner, or teacher, becomes more adept at reflecting, then those changes which positively impact a lesson can take place "on the fly," or in real time as a teacher teaches. This is the goal of NBC. Teachers teach, reflect on their teaching and change or transform their practice for the better. Like the previously described lifestyle changer, the changes become embedded in the "lifestyle" of the teacher in the classroom. Teachers become transformed to the point that they can reach what Shon refers to as reflection-in-action. Reflection-in-action is the condition where a practitioner is capable of making decisions based on immediate feedback from a situation. The professional does not wait until after the event to make a change. In the case of NBC, this means that a teacher has reflected on the standards, observed themselves in action and have an understanding of what

changes need to be made in their practice. An example might be, after questioning students about a particular topic a teacher, prior to NBC, preceded with a lesson in which students have very little background knowledge. After observing this lesson in a video and then reflecting upon the standards of assessment in the classroom they begin to see a disconnect between their teaching and students' level of understanding. After this experience, the teacher begins lessons by gathering information about student prior knowledge and changes her instruction immediately after seeing the disconnect in understanding. This process illustrated a move from reflecting-on-action to a teacher reflecting-in-action.

### **Relationships in NBC**

Cocker (1968) said, in his cover of the famous Beatles song:

I'm gonna get by with my friend, I tell ya

try with a little help from my friends

Ooh yes I'm gonna keep trying

with a little help from my friends

Keeping it trying with my friends

get by with a little help from my friends

[http://www.lyricsmode.com/lyrics/j/joe\\_cocker/with\\_a\\_little\\_help\\_from\\_my\\_friends.html](http://www.lyricsmode.com/lyrics/j/joe_cocker/with_a_little_help_from_my_friends.html)

NBCTs involved in this study echoed the importance of camaraderie and support throughout. Whether that friend was called a mentor, colleague, cohort member, or a peer, personal relationships which developed from the NBC process were valuable. In the next few sections the concepts of mentoring and collaborative teams are explored as they relate to the research findings in this study.

## **Mentoring**

Eight of the 15 NBCTs reported that having a mentor was a positive factor to their success in attaining NBC. Mentoring differs from other types of relationships identified by NBCTs in the study in that the mentors were successful completers of the process themselves. The NBC process is a highly technical process. As described previously, NBC requires the compilation of a portfolio, or “box” as it is referred to in NBC parlance, and per those very specific requirements teachers must video record themselves teaching, select an appropriate recorded segment for submission, edit the recording, burn the recording on to a DVD, write responses to recorded videos as they relate to the standards, and submit the portfolio to the NBPTS on time. The process is complex and much more difficult without the experience of someone who has done it before, i.e. a mentor. A benefit to having a mentor which was identified in the interviews with NBCTs was the technical ability of a mentor to assist and guide a candidate through unknown tasks. Tasks which required a level of technical expertise were also more easily done with the assistance of a mentor who had already successfully completed the experience. The technical support of a mentor created credibility in the mentor’s knowledge and ability to guide the candidate through the process. Aside from the technical assistance a mentor provided, there is another aspect of mentorship which may be the more important aspect.

A relationship of trust was built between the mentor and the candidate. The concept of mentoring was impressed upon the researcher from the very beginning stages of the study. While attending meetings at the state and regional levels where mentors and candidate support personnel interacted with state policy makers and personnel from the NBPTS, the researcher was impressed by the importance of mentoring in the NBC process in Pennsylvania. In meetings with candidate support program mentors at East Stroudsburg University and in Grove City the

researcher observed the passion of mentors of who were serving NBC candidates. One snowy morning in January the researcher attended a candidate support meeting at East Stroudsburg University where mentors drove several hours, hundreds of miles, in the snow to meet and discuss ways to better support the candidates to whom they were assigned. The amount of time they gave up from their personal lives to mentor a stranger was impressive. The mentors were spending a tremendous number of hours traveling and interacting with the candidates they supported. Those NBCTs who had a mentor reported feelings of gratitude toward the mentor as they were touched by the generosity of their mentors and were grateful to have the benefit of their technical assistance and experience. Often cited in the mentor/mentee relationship, which was developed in the process, the candidate did not want to let the mentor down. Statements like, “the mentor pushed me to complete the process,” “the mentor structured time for me to meet and set deadlines which I adhered to,” “the mentor made sure I stayed on track with my submissions and I didn’t want to let her down,” were common in interviews. The mentor’s investment of time in a candidate was valuable and important to the success of candidates. Being involved in a relationship in which someone cares about you and is invested in your success means a greater engagement for the person being mentored. The person being nurtured and growing because of that care and investment, because of that mentoring is experiencing a much greater benefit than receiving a certification. This relationship is a very important aspect of NBC. While materialism and win at all costs competition is often cited as pervasive in our society and the definition of success for many is being the best, which translates to being better than everyone else. NBC mentors prove that is not universally true. These NBC mentors are at the very least attempting to promote teacher professional improvement to the same level, or to a greater level than they experienced as candidates. This is refreshing to see in an educational

system which pits students against each other in class ranking, treats knowledge as a limited resource which is narrowly defined and is only available to a few, and success being a limited resource. NBC demonstrates this is not true. Success is highly individualized and it is abundant when everyone can feel successful if they are allowed to act upon the intrinsic desire to grow and feel accomplishment from investing themselves in something valuable. This process emphasizes those positive components of doing something because it is good for you and because it is difficult, and in the end, from that difficulty, or challenge, will come growth. The “stick-to-it-ness” which the mentoring process facilitated is a positive aspect of NBC and it has greater implications on our society.

### **Peers and Teams**

In addition to mentorship, the other relationships NBCTs cited as being instrumental was peer assistance or teams working together. To a lesser degree than mentoring, working with someone else had a positive outcome for some of the NBCTs interviewed in the study. Many of the same benefits of having a mentor were echoed in responses citing assistance from peer relationship or working on a team. Having someone to share the technical and logistical components of the NBC process like video recording, viewing recordings together, editing recordings, and reading responses for one another were ways peers or teams worked together to make the process more feasible for each other. Peers or teams developed a relationship of accountability which helped motivate individuals through the process. Candidates became accountable to each other. They did not want to let a peer or teammate down by missing a meeting or by not having work done by a deadline set by the group. These feelings of accountability to one another inspired some of the NBCTs to complete the portfolio. In one interview a NBCT cited a problem with the team which illustrated the power of a peer

relationship. In her school five teachers were working on the certification together. The group met weekly to review work, set goals and to socialize. After a few meetings two candidates stopped showing up. When the group began investigating why the two stopped showing up it was because they did not feel their work was up to par with the other three, so they began working together, separately from the larger group. The large team was not comfortable for all teachers, however, they found support in the peer relationship. The trust built in the peer group illustrates the value of the friendship formed by the NBC process. The example also illustrates the competitive nature of teachers which is facilitated by our current systems. If teams and peer relationships are formed in trust they can enable more candidates, and more teachers in general practice, to be more successful in changing their teaching to meet the needs of their students.

In several cases, NBCTs reported celebrating their accomplishment of completing the process by having a packing party. In these parties candidates and mentors meet to pack up the assessment materials into “the box” for shipment to the NBPTS. These parties were celebrations of the completion of the rigorous process, and they were also emotional times for some candidates because it meant the end of a relationship which had a specific purpose. Some NBCTs become mentors after successful completion of the process because of the strong connections they developed with mentors and peers. This passion was evident in all of the mentors and candidate support personnel interviewed in the study.

Some of the fundamental questions about NBCs relevance and true meaning are answered by the finding of this study. Is NBC a signal of a good teacher or is it good professional development? This is the quintessential question in the literature pool and the real political football when discussions turn to public funding for NBC. Is it really separating the wheat from the chaff by identifying the best teachers in the nation? Or is it creating the best teachers by its

process? This heavily debated question is really not important after examining the data derived from this study. The teachers involved in the study, all 15 NBCTs interviewed and 87 number of the open-ended on the online survey reported growth from the process. Many of the online survey respondents and all 15 NBCTs involved in the qualitative portion of the survey stated it was the most effective professional development of their careers. They cited an enhanced ability to assess student needs, better designers of assessments, more flexibility in dealing with students, and more fair in assessing students. Therefore, the question must really be asked, does it really matter if it identifies the best teachers or makes teachers better? Both things will have a positive impact on teaching and learning, so it really doesn't matter. The following describes why it is a positive system of professional development and how it will have an impact on students learning, which is our ultimate goal and the impact National Board Certification has on educational practice as identified by this study.

### **Implications for Practice**

Shulman said in *The Wisdom of Practice* (2004):

After 30 years of doing such work, I have concluded that classroom teaching...is perhaps the most complex, most challenging, and most demanding, subtle, nuanced, and frightening activity that our species has ever invented...The only time a physician could possibly encounter a situation of comparable complexity would be in the emergency room of a hospital during or after a natural disaster.

Teaching is a complex activity. Diagnosing the needs of upwards of 30 children in a classroom filled with distractions and then prescribing some intervention, the appropriate intervention, to facilitate growth for each student is a very difficult task. Yet it is a necessary task if students are to learn to their fullest potential. Shulman's quote, often used by educational speakers and

authors to illustrate the complexity of the teaching profession and the complexity of teacher professional development, is illustrative of the need for a fundamental change in the way school leaders develop better teachers. If the classroom environment example used by Shulman is truly a complex, challenging, demanding, subtle, nuanced, and frightening, then honing the skills of the teachers employed with the charge of instructing our youth is complex, difficult, demanding, and very necessary.

### **NBC as Professional Development**

The literature pool is rife with teacher professional development models, strategies, programs, systems, and on and on. The pitch to school administrators is typically the same, “It will increase your test scores.” “It is aligned to the standards.” “It is research based.” And all of these statements can be true, but those factors, increased test scores, standards alignment, research based don’t always matter. According to Danielson (2011), teacher professional development must be grounded in research based practices which improve student learning. Danielson breaks these 22 characteristics into four domains. These are the basis of ongoing, standards based, professional improvement. She is the architect of the teacher evaluation frameworks for many states, including Pennsylvania, and she designed many of the forms used by the NBPTS in the NBC certification process. Danielson’s framework emphasizes professional improvement which is grounded in the daily work of teachers, it is highly reflective and the based heavily on the notion that professional improvement is a continuous process. Traditional methods of single event teacher in-servicing, whereby teachers are exposed to some new program and then expected to go out and improve their practice, rarely meet the requirements Danielson suggests as effective professional development. Like Danielson’s model, teachers need a deep understanding of what they are supposed to be doing, and then they



need a mechanism to reflect, or to view themselves teaching, so they can see what they are actually doing. This is the basis of National Board Certification. Teachers video record themselves teaching, then they watch the videos and compare themselves to a set of standards. They write reflections of what they saw in their teaching related to those standards. They acknowledge gaps between the standard and their practice, then develop plans to bridge those gaps. This process happens over the course of much of school year for the 40% who achieve NBC on their first attempt, or two years for those 60% who don't achieve the first time and need to resubmit one or more sections. In the NBC process teachers have an extended period of time to reflect on their own teaching, examine their practice within the context of "industry standards," and think about ways to change, hopefully improve, their teaching. This cycle of performance, reflection, performance, reflection is what Schon described as reflection-on-action. According to Schon, the practice of actually doing something and then reflecting on it afterwards can activate a professional's ability to evaluate the effectiveness of their practice, observe the results and then make adjustments to meet the needs of their clients, in this case those clients are students. As teachers reflect, compare their practice to standards, and write about the experience they grow in very meaningful ways. Reflection-on-action is exactly what NBC is and it was a progression from Shon's reflection-on-action to what he refers to as reflection in action is the ultimate goal for professional development. Reflection-in-action means the process of receiving feedback and adjusting one's response to the feedback is immediate. It requires the application of knowledge about a situation to be spontaneous and rapid. Like the earlier metaphor with the lifestyle changing dieter, responding to situations in the classroom becomes part of one's lifestyle. It requires constant assessment of the response of students and instant decisions about interventions in the classroom.

The NBCTs in the study cited changing during the process. Some were surprised at how reflective they became. They were reflecting almost subconsciously. It became part of who they were as teachers. This was the transition point from reflectors-on-action to reflectors-in-action. The transformation to reflection-in-action is a very high level skill. It requires teachers to be professionals in the way they think and act, making professional decisions in planning instruction, and assessment, and it requires thoughtful, reflective, and flexible implementation of lesson plans. Teachers are currently being torn in two divergent directions. On one hand we expect them to be flexible in their planning for the diverse individual needs of the students in their classrooms. Yet they are also stuck in the technical rational standards based system of requiring all students, despite their varied abilities and interests, to learn the same material at the same time. This is an impossibility and it is killing our teachers desire to teach and our kids desire to learn.

### **Compliance v. Engagement**

The difference between engagement and compliance is extremely important in facilitating professional growth. Deci (1995) and later Pink (2011) wrote about the difference between compliance and engagement. Compliance is defined in Webster's dictionary as: "1. a: the act or process of complying to a desire, demand, or proposal or coercion. b: conformity in fulfilling official requirements 2. a: a disposition to yield to others" Compliance is doing what you are told. Webster defines engagement as: "to hold attention of : to induce to participate: to take part." Engagement means being actively involved in something. The difference between the two is where the type of motivation to complete something lies. In compliance the motivation is external, in the form of a punishment or reward. In engagement the motivation is internal, in the form of an intrinsic desire to do something. Both Deci (1995) and Pink (2011) identify factors

which will lead to intrinsic motivation and those are: 1. Autonomy, or individual choice, 2. Mastery, appropriate level of rigor for an individual to achieve success, and 3. Purpose, real life relevance for the individual involved. These factors are fundamental in ensuring an activity is meaningful and provides individuals intrinsic value. Rewards and punishments tend to extinguish ones internal desire to complete something. Engagement in an activity which has the three elements identified by Deci tend to be intrinsically satisfying and motivating. The NBC process can have the three characteristics of engagement under the right circumstances.

The National Board Certification process has the potential to meet Deci's three criteria of engagement. The certification process is appropriately rigorous for a teacher who has been through an education program with a base of experience. In the process the candidate has a high level of autonomy in the lessons which they teach and the recordings which they use. The process is appropriately rigorous as it allows the individual opportunities to edit work after it has been read by peers or mentors, it provides opportunities for retakes, thus the process provides a systematic continuum toward mastery. The level of engagement for the NBCTs in the study was very high. NBC is relevant as there is a personal investment in the process which must take place in order for it to reach the level of engagement described by Deci, and this investment can be painful.

Taking a hard look at what you are doing as a teacher can be a painful process. When teachers measure themselves against a set of standards they may see areas where they fall short. However, this process is necessary and in the current climate of teacher observation and teacher evaluation it is a missing component. Principals don't have the time to conduct the type of focused observation and then reflect on the observation while comparing the teaching to a set of standards and then writing about the gap between practice and what was observed in the lesson.

Teachers who do this type of reflection and analysis of their teaching are highly engaged in their own professional development. The process also takes a tremendous amount of thought and quite frankly most principals are unable to identify gaps in a teacher's practice as well as an accomplished teacher is able to identify those gaps between what they are doing and what they are supposed to be doing.

### **NBC and Professional Development Costs**

Teacher professional development is a huge expense in the US. Although inconsistencies in accounting among school districts make it impossible to get a solid number, it is estimated that school districts spend between 1.5% and 5% of their overall budget in professional development costs. School districts had total expenditures of approximately \$596.6 billion in the 2007-08 school year according to the NCES. At the low estimate of 1.8% of school budgets being spent on teacher professional development, then schools in the US spend nearly \$10.8 billion per year on teacher in-servicing. The average spending per pupil in the same school year was over \$10,000 as reported by the NCES. Public spending on teachers is a tremendous investment, yet a WestEd (2000) article reported that:

Unfortunately, well over half of U.S. teachers get less than a day's worth of professional development annually, as contrasted with teachers in many other countries who work on professional development for 10-20 hours a week. Many U.S. professional development experiences focus on general "training" delivered en masse to large groups of teachers on a given day. There is little or no follow-up that might enable teachers to incorporate what they've just learned into their own classroom settings — to continue learning and, in the process, transform their new skills and knowledge into deep understanding and more effective teaching (2000).

This norm of teacher professional development is not an effective way to spend the nation's resources, nor is it translating into better learning in students. NBC process is a cost effective way to provide ongoing, relevant teacher professional development to our nations teaching force. The NBC process costs \$2500 dollars. In the past the state of Pennsylvania and the NBPTS offered tuition scholarships for any teacher applying. This funding is in jeopardy and may not be continue to be available, however, the costs of NBC and the benefit to school districts are addressed below.

### **Why not More NBCTs in PA?**

National Board Certification has the elements which are associated with good professional development. It is ongoing, reflective, and it focuses on instructional practice which is grounded in industry standards, so why aren't more schools promoting it with their teachers? Why aren't more teachers pursuing it? How can educational leaders encourage more teachers to apply for NBC? Sixty percent of NBC candidates fail on their first attempt. In Japanese the word for teacher is sensei which translated to English means "master." Many teachers feel the pressure to be this "master" of knowledge and it is a difficult prospect for someone who is supposed to be a sage of wisdom and understanding to undertake a process in which there is a greater probability of failure than success. It is difficult to recruit teachers who have a strong sense of pride in being an expert into such a risky undertaking as NBC. Additionally, just as our culture has used external rewards to motivate people, education systems have used financial rewards to lure teachers into trying new practices. Although there are many school districts in the state which reward NBCTs with stipends and salary increases, they are relatively few compared to the overall population of teachers in the state. Financial rewards for NBC are

vanishing in many areas due to budget cuts and it will be more important for educational leaders who value NBC to find other ways to motivate teachers to engage in the process.

### **Recruitment**

The study examines initial motivational factors for teachers to begin the NBC process in Pennsylvania. How can those interested in improving teaching and learning recruit more practicing teachers to the NBC process in Pennsylvania? Empirical quantitative data suggests that successful NBCTs in Pennsylvania began the process because they were interested in improving their professional practice. Other initial motivating factors like recognition, financial incentive and potential leadership positions were not strong motivating factors for NBCTs in the study. Additionally, the qualitative data suggests that teachers who started the process for reasons other than professional improvement, experienced changes in their motivation to complete the process and professional improvement ultimately became the strongest factor to persist to completion.

Given this appreciation of the value of completion, school leaders, state policy makers, candidate support persons, NBPTS personnel should emphasize the transformational nature of the certification to potential candidates. Those teachers who value professional change and those teachers who are serious about becoming better teachers are more likely to apply and to complete the rigorous process. The extrinsic nature of other motivating factors, like financial incentives and recognition, are ineffective at motivating candidates through the long term and to the end of the process. This data is consistent with what Deci has uncovered about the long term effects of extrinsic rewards to motivation. Deci believes that extrinsically rewarding behavior can have a negative impact on intrinsic desire to complete a task. He says that in order for something to be motivating it an individual must feel autonomy, mastery and purpose in the activity (Deci, 1995).

Extrinsic rewards tend to extinguish intrinsic desire and an individual tends to complete the task with the goal of gaining the reward (Deci, 1995). This was true in the NBCTs interviewed in the study. Those initially interested in extrinsic factors like money or recognition did not feel that the extrinsic reward was enough to sustain them through the process. Once they began to change due to the transformational process of NBC, they became intrinsically motivated to continue. This intrinsic desire to change professionally and to complete the certification process became the force which kept them on the trajectory to finish. Knowing this will help recruiters of NBC candidates focus on those teachers who show a strong intrinsic desire to grow professionally.

Creating a survey, interviewing principals and teacher supervisors to find teachers who are intrinsically motivated would be a great way to develop a list of candidates likely to complete the process. Also, emphasizing the transformational nature of the NBC process in presentations to teachers, print material, and other forms of marketing media may attract teachers who are more likely to successfully complete the process.

### **Recommendations for Future Research**

There have been several ideas for future research spawned by the findings of this study. The following sections describe areas which future research could add to the literature about NBC, NBPTS and NBCTs.

One recommendation for further study is to look at the reasons NBCTs dropped out of the process. The antitheses of this study would be what factors led candidates to quit the process or what were the obstacles to completion which were insurmountable. Much of the state and NBPTS funding of candidate scholarships has been wasted in the past years due to teachers dropping out of the process. Also, if the transformation change in teachers happens as they progress through the NBC process, it would benefit more teachers to stay in the process to

completion. Knowing the reasons why teachers drop out will allow those interested in recruiting and supporting NBC candidates in overcoming the factors which lead to failure and drop out.

Another area for further study is on the benefits to students in Pennsylvania who have NBCTs. There have been studies pertaining to student achievement as it relates to NBCTs in other states, however, there are no studies of student achievement of Pennsylvania students who have NBCTs. Studies conducted in Maine, California, North Carolina and South Carolina could be replicated in Pennsylvania. Data relative to performance of students being taught by NBCTs in the state would help policy makers and educational leaders decide if more NBC funding should be provided to teachers.

Teachers in the study reported changing during the NBC process. They cited becoming reflective practitioners who were thoughtful about planning lessons and flexible in implementing lessons based on the response of their students. An area for further exploration is how do NBCTs continue to use the reflective practice emphasized by the NBC process after they attain the certification? NBCTs go through a recertification process every ten years. What happens to them in those ten years? It would be valuable to study what lasting impact the certification has on these teachers and their students. The sample group for this study can be found in the population of NBCTs who are completing their recertification.

One of the common questions related to NBC is whether it is a signal of quality teaching or it is good professional development. These questions may be explored by looking at the teaching practices of teachers prior to beginning the NBC process. A comparison of teaching practices of successful NBC candidates with those practices of candidates who were not successful or of those who did not apply may shed some light on this debate. If the qualities associated with success in the NBC process, i.e. reflectivity, understanding of teaching standards, ability to write



about the variances between the standards and their practice are evident in only successful candidates, then it may be a signal of great teaching. If both sample groups exhibit those characteristics then another phenomenon may be present. Also, if neither sample group exhibits those characteristics prior to the process then it may be good professional development.

This study found that the reflective qualities of National Board Certification had an impact on teacher's perception about how they teach. A study using Deci's theory about intrinsic motivation as a theoretical base, research exploring the connection between reflective practice and intrinsic motivation would help school personal better motivate teachers. A survey developed to measure teacher's perceptions about their job performance before and after some method of reflective practice would measure the impact of reflective practice and their feelings of motivation.

This study revealed several different models of NBC. In some cases teachers were involved in a cohort model, in others teachers were assigned a mentor, and in others teachers completed the process alone. Another area for future research is to the differences in these three models of NBC. Is there a difference in perceived impact on teachers based on the model? What are the impacts of various models on student achievement? Is there a difference in the quality of the NBC program based on the model? Relationships were perceived as highly important to NBCTs in this study. A study specific to those relationships would benefit those supporting and advocating for NBC in the state.

One of the factors identified in this study which led NBCTs to become interested in the NBC process was a relationship with a leader. Although leadership was not identified as a strong motivating factor for starting NBC, teachers were influenced by their leaders to start. An area for future study which will impact recruitment of accomplished teachers to NBC is influence of a

leader. Some school districts have comparatively large numbers of NBCTs. Is there a leader influencing teachers to become NBCTs? Does this encouragement translate to more support or higher passing rates? There is no research relative to teachers in Pennsylvania to answer these questions.

A final recommendation for future study is to use the online survey from this study to collect data about motivational factors of NBC candidates before the start the process and then resurvey the candidates after they have completed the NBC process. This methodology would give you a scientific method for measuring the initial motivational factors and then allow the researcher to compare those initial factors to factors of persistence. This will give researchers quantitative data which would measure the difference between motivating throughout the process. This information would be valuable to those supporting candidates through the NBC process in that it will allow mentors to help candidates work through obstacles to successful completion.

## **Summary**

### **A Model of Professional Development**

Throughout this study the researcher heard the question of whether NBC identifies great teachers, or is it a model of great professional development. Earlier in this chapter the discussion moved to an assumption that it really doesn't matter, whether identifying accomplished teachers, or creating accomplished teachers, the end results are accomplished teachers. However, National Board Certification is not the only way to incorporate the qualities of effective professional development, engagement as a motivational tactic, and continuous improvement via reflective practice. Qualities embedded in the certification process can be implemented by school entities for professional improvement of their teachers. The strength of the NBC process is multi layered and can be replicated on a local level by the incorporating its methods into small learning

communities of 6-8 professionals. Within these small learning communities teachers can review the accepted standards for accomplished teaching, and then they can reflect on their own teaching practice to objectively identify what they are doing in the classroom. Next they can measure their practice based on the standards. All teachers would be assigned a mentor to oversee their progress, to hold them accountable and to give them credible feedback in their practice. Then teachers develop a plan to change practice. Finally, they reflect again on the impact of their practice and review it based upon the standards and continue to change as necessary. This process of guided continuous progress is facilitated, over time, by the mentor.

Knowing where you are supposed to be going is fundamental in understanding where you are now. Many teachers rely solely on their progress and coverage of curriculum, text books, student grades to evaluate how they are doing as a practitioner. Understanding what good instruction looks like is the first step in understanding if you are a good instructor. The standards associated with NBC are comprehensive and can be used by teachers and their supervisors to acquaint themselves with the standard of their “industry.” Used as an exemplar of where teachers should be provides a road map to where they are going as instructors, motivators, assessors, diagnosticians. Teachers need access to the standards and time to read, comprehend, observe and practice the standards. Professional development time spent in small learning communities of 6-8 teachers reviewing the standards is an effective method of delivering this training. However, this set of standards is useless unless they are used as a measuring stick to assess a teacher’s current practice.

The second step in a NBC based professional development model is to measure a teacher’s current practice against a standard. Using a similar method to those in the NBC process, teachers review recordings of themselves teaching, then cite where their teaching conforms to a standard,

or where it could be improved in order to meet a standard. This practice is what Shon defined as reflection-on-action and is a step in a profession taking a reflective look at their practice with the intent of engraining the effective practice into the daily behavior of the teacher, thereby becoming a model of reflection-in-action. Again, in professional learning communities, after learning a standard, teachers deliver a lesson which is recorded. They review the recording either in the professional learning community, or independently, then write about their practice related to a standard. The learning community is a resource to assist in review the recordings, discussing the comparison between current practice and the standards, and to suggest areas for continued study.

The results of this study suggest that a mentor, or mentors, was a very positive influence in a candidate's successful transformation during the NBC process. The mentor provided advice from an expert who had been there before. Whether it was technical assistance, accountability to keep working, or moral support when things were tough, the mentor helped teachers reach their goals of becoming an NBC. For these reasons it is also suggested that the practice be implemented in the model professional development program. Schools are accustomed to assigning mentors for new teachers, however, the formal concept of always working with a mentor is somewhat foreign. Informal relationships which mimic what would be called a mentorship exist naturally. Fostering these informal relationships into mentorships can easily be done by allowing teachers to work together, with structure, in professional learning communities. School administrators need to identify these relationships and provide common time for the teacher and mentor to meet. A mentor could be assigned 6-8 teachers as the facilitator of a professional learning community.

The last part of the model plan would be to formalize the professional improvement into a document which exhibits evidence of professional growth. The Pennsylvania Department of Education is rolling out a new teacher evaluation system which it calls “Teacher Effectiveness.” This model plan fits nicely with the state’s vision of what professional improvement for teachers should be. In the state’s model, teachers meet with an administrator prior to observing a class. The teacher and administrator meet to conference about the upcoming lesson and plan the observation, which is simply an evidence collecting time for the administrator. After the observation, the teacher completes a self reflection rubric to assess the lesson. The administrator also completes the assessment rubric. A post conference ensues in which the teacher and administrator discuss the evidence collected from the observation and develop an improvement plan, for each teacher. Here is where this model of professional development picks up. After an area of focused improvement is identified, the administrator provides an appropriate set of standards to the teacher, assigns a mentor and begins the cycle of steps previously listed in this section.

These steps can be implemented within a school system without the need for teachers to undergo the NBC process. This model utilizes the strengths of the people in the system and it places value on the experience of veterans coupled with agreed upon standards of practice. This model is more motivating for teachers than an authoritative method would be in that it gives professional autonomy into their professional improvement, is appropriately rigorous in order to ensure mastery on an individual level, and it is purposeful to a teacher’s everyday practice.

## Conclusion

“Vision without action is a hallucination.” Kyle Peck

The United States is a country composed of many diverse people who have very complex needs. Reformation of any governmental system within such a complex nation is challenging. There is as much debate about what is broken with the nation’s educational system as there are solutions to those problems. Within an ocean of literature about educational systems there seems to be some agreement that teachers have some impact on improving the conditions within their own classrooms. National Board Certification is one way for teachers to look reflectively at their work, compare what they are doing to an applicable set of standards, and then make positive changes to their practice. The teachers involved in this study were motivated to begin the process by various factors, however, there was one common factor in the end of their successful journey, they changed. The changes they underwent through the process were considered to be positive changes, having a positive impact on their teaching and the learning of their students. The very important aspect of the NBC process is the process. The end result of being certified by a national organization is less important than the process of a teacher learning the discipline of reflecting upon what they are doing. However, reflecting is not enough. Teachers must take action upon their reflecting. They must know what qualities of good teaching should be evident in their practice and, working with mentors, they need realistic understanding of where their practice needs to improve. Barriers created by authoritative teacher evaluation systems need to be removed. A system of teacher improvement which emphasizes teacher autonomy, purpose and mastery is crucial to finally, 30 years after *A Nation at Risk*, allow teachers to make a difference in the educational systems in our country.

## References

- American Board of Internal Medicine (2012). First-Time Taker Pass Rates - Initial Certification. Retrieved from <http://www.abim.org/pdf/pass-rates/cert.pdf>
- Angus, D. (2001). Professionalism and the public good: A brief history of teacher certification. Washington, D. C.: Thomas B. Fordham Foundation.
- Attinello, J. (2004). *Portfolio based teacher appraisals* (Unpublished doctoral dissertation). Indiana University of Pennsylvania, Indiana, PA.
- Argyris, C., & Schon, D. (1974) *Theory and practice: Increasing professional effectiveness*, San Francisco, CA: Jossey-Bass.
- Baird, J. (1991). *Individual and group reflection as a basis for teacher development*. In P. Hughes (Ed.), *Teacher's professional development*. Hawthorne, Victoria: Australian Council for Educational Research.
- Bales, R. (2004). *Perceived indicators of support leading to the successful attainment of the national board for professional teaching standards certification*. (Doctoral dissertation). Retrieved from Electronic Theses and Dissertations (0826104-142411).
- Bond, L., Smith, T, Baker, W., & Hattie, J. (2000). *The certification system of the national board for professional teaching standards: A construct validity study*. Greensboro, NC: Department of Education Research Methodology and Center for Research and Evaluation, University of North Carolina.
- Boyd, W., & Reece, J. (2006). Great expectations. *Ed Next*. Palo Alto CA: Hoover Institution. Retrieved March 6, 2008, from <http://www.educationnext.org/20062/50.html>

- Bryk, A., & Schneider, B. (2002). *Trust in schools*. New York, NY: Russell Sage.
- Campbell, D., Campbell, K., & Chia, H. (1998). Merit pay, performance appraisal, and individual motivation: An analysis and alternative. *Human Resource Management*, 37(2), 131-146.
- Campbell, D., Cignetti, P., Melenzyer, B., Nettles, D., & Wyman, R. (2001). *How to develop a professional portfolio: A manual for teachers* (2nd ed.). Needham Heights, MA: Allyn & Bacon.
- Carnegie Forum on Education and the Economy. (1986). *A nation prepared: Teachers for the 21<sup>st</sup> century*. New York, NY: Carnegie Corporation.
- Case, S. (2012). The testing column: Persistence on the bar exam. Retrieved from [http://www.ncbex.org/assets/media\\_files/BarExaminer/articles/2012/810412beTestingColumn.pdf](http://www.ncbex.org/assets/media_files/BarExaminer/articles/2012/810412beTestingColumn.pdf)
- Cavalluzzo, L. (2004). Is national board certification an effective signal of teacher quality? (November 2004 ed.) Alexandria, VA: The CNA Corporation.
- Cohen, C., & Rice, J. (2005). National board certification as professional development: design and cost. In *The Finance Project* (August 2005). Retrieved from [http://www.financeproject.org/publications/National\\_Board\\_Certification.pdf](http://www.financeproject.org/publications/National_Board_Certification.pdf)
- Commission on Excellence in Education. (1983). *A nation at risk: The imperative for educational reform*. Washington D.C.: The Commission on Excellence in Education.
- Corno, L. (1994). Student volition and education: Outcomes, influences, and practice. In D. Schunk, & B. Zimmerman, (Eds.), *Self-Regulation of learning and performance: Issues and educational applications*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Clotfelder, C., Ladd, H., & Vigdor, J. (2007). *How and why do teacher credentials*



- matter for student achievement?* Washington, DC: National Center for Analysis of Longitudinal Data in Educational Research, Urbane Institute.
- Darling-Hammond, L., & McLaughlin, M. (1995). Policies that support professional development in an era of reform. *Phi Delta Kappan*. Retrieved June 2, 2009, from <http://www.middleweb.com/PDPolicy.html>
- Dagget, W. (Eds.). (2008, June). Proceedings from the Model Schools Conference, '08: *The nation's most successful schools-Lessons learned*. Rexford, NY: International Center for Leadership in Education.
- Danielson, C., & McGreal, T. L. (2000). *Teacher evaluation to enhance professional practice*. Princeton, NJ: Educational Testing Service.
- Deci, E. (1995). *Why we do what we do*. New York, NY: Penguin Books.
- Deci, E., Koestner, R., & Ryan, R. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, 125(6), 627-668.
- Dewey, J. (1933). *How we think*, New York, NY: D. C. Heath.
- Education Commission of the States. (2001). *Pay-for-performance: Key questions and lessons from five current models*. Denver, CO: Education Commission of the States.
- Frank, K., Zhao, Y., & Boreman, C. (2004). Social capital and the diffusion of innovations within organizations: Application to the implementation of computer technology in schools. *Sociology of Education*, 77, 148-171.
- Frank, K., Sykes, G., Anagnostopoulos, D., Cannata, M., Chard, L., Krause, A., & McCrory, R. (2008). Does NBPTS certification affect the number of colleagues a teacher helps with instructional matters? *Educational Evaluation and Policy*

*Analysis*, 30(1), 3-30.

Freedman, R. L. H. (1998). *Constructivist assessment practices*. Buffalo, NY: Buffalo State College.

Freund, M., Russell, V., & Kavulic, C. (2005). A study of the role of mentoring in achieving certification by the national board for professional teaching standards. (research Study, George Washington University, May 2005). Retrieved from [http://www.nbpts.org/resources/research/browse\\_studies?ID=19&print=on](http://www.nbpts.org/resources/research/browse_studies?ID=19&print=on)

Garcia, M., Sanchez, V. & Escudero, I. (2007). Learning through reflection in mathematics. *Educational studies in mathematics*, 64(1), 1-17.

Gay, L., Mills, G., & Airasian, P. (2006). *Educational research: Competencies for analysis and applications*. Upper Saddle River, NJ: Pearson Education.

Goldhaber, D., & Anthony, E. (2007). Can teacher quality be effectively assessed? National board certification as a signal of effective teaching. *The Review of Economics and Statistics*, 89, 134-150.

Goldhaber, D., Perry, D., & Anthony, E. (2003, March 20). NBTS Certification: Who applies and what factors are associated with success?. Retrieved from <http://www.urban.org/url.cfm?ID=410656&renderforprint=1>

Goorian, B. (2000, November). Alternative teacher compensation. *ERIC Digest*, 142. Retrieved from <http://www.eric.ed.gov/PDFS/ED446368.pdf>

Grunshka, K., McLeod, J., & Reynolds, R. (2005). Reflecting upon reflection: Theory and practice in one Australian university teacher education program. *Reflective Practice*, 6(2), 239-246.

- Guskey, T., & Huberman, M. (1995). *Professional development in education: New paradigms and practices*. New York, NY: Teachers College Press.
- Hakel, M., Koenig, J., & Elliott, S. (2008). *Assessing accomplished teaching: Advanced-level certification programs*. Committee on Evaluation of Teacher Certification by the National Board for Professional Teaching Standards, National Research Council. Retrieved from [http://www.nap.edu/catalog.php?record\\_id=12224](http://www.nap.edu/catalog.php?record_id=12224)
- Harris, D., & Sass, T. (2007). *The effects of NBPTS-certified teachers on student achievement*. Washington, DC: National Center for Analysis of Longitudinal Data in Educational Research, Urbane Institute.
- Hess, F. (2003). *Tear down this wall: The case for a radical overhaul of teacher certification*. Presented on August 8, 2003. Washington, D. C.: The White House conference on preparing tomorrow's teachers.
- Higgins, C. (2001). From reflective practice to practical wisdom: Three models of liberal teacher education. In *Philosophy of education yearbook* (pp. 92-99). Champaign: University of Illinois at Urbana-Champaign.
- Honawar, V. (2008). Teacher certification. *Education Week*, 27(42), 1.
- Humphrey, D., Koppich, J., & Hough, H. (2004). *Sharing the wealth: National board certified teachers and the schools that need them most*. Menlo Park, CA: Stanford Research Institute International.
- Jenkins, K. (2000). Earning board certification: Making time to grow. *Educational Leadership*, 57(8), 46-48.
- Johnson, R., & Onwuegbuzie, A. (2004). Mixed method research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 4-26.

- Keller, B. (2007). More minority teachers earn national certification. *Education Week*, 26(21), 1.
- Lambert, L. (2003). *Leadership capacity for lasting school improvement*. Alexandria, VA: Association for Curriculum and Supervision.
- Little, J. (1994)., Teachers professional development in a climate of education reform. Washington, D.C.: U.S. Department of Education.
- Lee, I. (2007). Preparing pre-service English teachers for reflective practice. *ELT journal*, 61(4), 321-329.
- Louis, K., Marks, H., & Kruse, S. (1996). Teacher's community in restructuring schools. *American Educational Research Journal*, 33(4), 757-789.
- Lustick, D., & Sykes, G. (2006). National board certification as professional development: What are teachers learning? (Research study, Michigan State University, March, 2006) Retrieved from [www.nbpts.org/resources/research/browse\\_studies?ID=18](http://www.nbpts.org/resources/research/browse_studies?ID=18)
- Malkani, J., & Allen, J. (Eds.). (2009, April). Proceedings from AERA conference '09: *Cases in teacher education: Beyond reflection into practice*. Montreal, Canada: Association for Educational Research.
- Marzano, R. J. (2000). *A new era of school reform: Going where the research takes us*. Aurora, CO: Mid-continent Research for Education and Learning.
- McLaughlin, M., Vogt, M. E., Anderson, J. A., DuMez, J., Peter, M. G., & Hunter, A. (1998). *Professional portfolio models: Applications in education*. Norwood, MA: Christopher-Gordon.
- McCloskey, W., Stronge, J., Ward, T., Tucker, P., Howard, B., Lewis, K., & Hindman, J.

(2006). *Teacher Effectiveness, student achievement, and national board certified teachers*. Retrieved from [http://www.wm.edu/education/teacher%20Effectiveness,%20Student,%20Achievement,%20andNational%20board%20certification %20teachers.pdf](http://www.wm.edu/education/teacher%20Effectiveness,%20Student,%20Achievement,%20andNational%20board%20certification%20teachers.pdf)

McNiff, J. (1993). *Teaching as learning: An action research approach*. London, England: Routledge.

National Academies of National Board for Professional Teaching Standards. (2007). *A research guide on national board certification of teachers*. Arlington, VA.: National Board for National Teaching Standards.

National Board for Professional Teaching Standards. (2008). *National Board Certification and Teacher Effectiveness: Evidence from a Random Assignment Experiment*. (2<sup>nd</sup> ed.) Washington, D.C.: Cantrell.

National Board for Professional Teaching Standards. (2008). *Every child deserves a great teacher*. Arlington, VA.: National Board for National Teaching Standards.

National Board for Professional Teaching Standards. (2008). *Q & A for 2008 national board certification: A guide for teachers and other education stakeholders*. Arlington, VA.

National Board for Professional Teaching Standards. (2008). NBCT's by state. Retrieved from [http://www.nbpts.org/resources/nbct\\_directory/ nbcts \\_bystate?](http://www.nbpts.org/resources/nbct_directory/nbcts_bystate?)

National Board for Professional Teaching Standards. (2009). *Voices of influence: Advancing high quality teaching through national board certification*. Arlington, VA.: National Board for National Teaching Standards.

National Commission on Teaching & America's Future. (1996). What matters most:

- teaching for America's future. New York, NY: National Commission on Teaching & America's Future.
- Nolan, J., & Francis, P. (1992). *Changing perspectives in curriculum and instruction*. In C. D. Glickman (Ed.), *Supervision in Transition: 1992 ASCD yearbook* (pp. 7-29). Alexandria, VA: Association of Supervision and Curriculum Development.
- Odden, K., & Kelley, C. (2002). *Paying teachers for what they know and do: New and smarter compensation strategies to improve schools*. Thousand Oaks, CA: Corwin Press.
- O'Sullivan, R., Hudson, M., Orsini, M., Arter, J., Stiggins, R., & Iovacchini, L. (2005). Student achievement and performance. Retrieved from [http://www.nbpts.org/resources/research/browse\\_studies?ID=12&print=on](http://www.nbpts.org/resources/research/browse_studies?ID=12&print=on)
- Pessiglione, M., Schmidt, L., Draganski, B., Kalisch, R., Hakwan, L., Dolan, R., & Frith, C. (2007). How the brain translates money into force: A neuroimaging study of subliminal motivation. *Science*, 316(5826), 904-906
- Podgursky, M. (2001). Defrocking the National Board: Will the imprimatur of "Board Certification" professionalize teaching? *Education Matters*, 1(2), 79-82.
- Portney, L., & Watkins, M. (1993). *Foundations of clinical research: Applications to practice*. Stanford, CT: Appleton & Lange.
- Rahn, M., & Stecher, B. (1997). Making decisions on assessment methods: Weighing the tradeoffs. *Preventing School Failure*, 41, 85-89.
- Reichardt, R., & Van Buhler, R. (2003). Recruiting and retaining teachers with alternative pay. Washington, D.C.: US Department of Education.
- Riggs, I. M., Sandlin, R. A., Scott, L. D., Childress, L., & Mitchell, D. E. (Eds.). (1997, April). Proceedings from the presented at the annual meeting of the AERA '97: *The new teacher*

- portfolio: A bridge to professional development*. Chicago, IL: American Educational Research Association.
- Riley, M. (2007). Why we invest in board-certified teachers. *School Administrator*, 64, (7).
- Ross, J. (2006). You can get the national board certification. *Multimedia and Internet @ Schools*. 13(1)
- Ryan, R., & Deci, E. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54-67
- Sabelli, N., & Dede, C. (1999). Reconceptualizing the goals and processes of educational research funding: Interconnecting scholarship and practice. Washington, D.C.: National Science Foundation.
- Sanders, W., Ashton, J., & Wright, S. (2005). Comparisons of the effects of NBPTS-certified teachers with other teachers on the rate of student academic progress. Arlington, VA: National Board for Professional Teaching Standards. Retrieved from [http://www.nbpts.org/UserFiles/File/SAS\\_final\\_report\\_Sanders.pdf](http://www.nbpts.org/UserFiles/File/SAS_final_report_Sanders.pdf)
- Schon, D. (1983). *The reflective practitioner: how professionals think in action*, New York, NY: Basic Books.
- Schrock, K. (1997). The many layers of assessment. *Technology Connection*, 4, 5.
- Sergiovanni, T., & Starratt, R. (1993). *Supervision: A redefinition* (5th ed.). New York, NY: McGraw-Hill.
- Shavelson, R. (1996). *Statistical Reasoning for the Behavioral Sciences*. Boston, MA: Allyn and Bacon.
- Shulman, L. (1988). A union of insufficiencies: Strategies for teacher assessment in a period of

educational reform. *Educational Leadership*, 46(3), 36-41.

Smith, T., Gordon, B., Colby, S. A., & Wang, J. W. (2005). An examination of the relationship between depth of student learning and national board certification status (Research Study, Appalachian State University June, 2005). Retrieved from [http://nbpts.org/resources/research/browse\\_studies?ID=14&print=on](http://nbpts.org/resources/research/browse_studies?ID=14&print=on)

Soonhye, P., Oliver, J., Johnson, T., Graham, P., & Oppong, N. (2007). Colleagues' roles in the professional development of teachers: Results from a research study of National Board certification. *Teaching and Teacher Education*, 23(4), Retrieved from [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6VD8-4N08M9C2&\\_user=10&\\_rdoc=1&\\_fmt=&\\_orig=search&\\_sort=d&view=c&\\_acct=C000050221&\\_version=1&\\_urlVersion=0&\\_userid=10&md5=2f303da7ab7f8bd6a3907bf021d68fc8](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6VD8-4N08M9C2&_user=10&_rdoc=1&_fmt=&_orig=search&_sort=d&view=c&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=2f303da7ab7f8bd6a3907bf021d68fc8).

Spillane, J. (2006). *Distributed leadership*. San Francisco, CA: Jossey-Boss.

Spring, J. (2006). *American Education*. New York, NY: McGraw Hill.

SPSS, Inc. (2008) Software Description Retrieved from [http://www.spss.com/software/?source=homepage&hpzone=nav\\_bar](http://www.spss.com/software/?source=homepage&hpzone=nav_bar)

Steadman, S., & Simmons, J. (2007). Teachers not certified by universities burden our best teachers. *Education Digest*. 72(7).

Stephens, A. (2003). *The relationship between National Board certification for teachers and student achievement*. (Unpublished doctoral dissertation), College of Education, University of South Carolina, Columbia.

Stokes, L., & Helms, J. (2004). Bringing national board standards to the preparation and certification of teachers: portraits of four universities participating in the Washington



- initiative. Inverness, CA: Inverness Research Associates.
- Stone, J. (2002). The value added achievement gains of NBPTS-certified teachers in Tennessee: A brief report. College of Education, East Tennessee State University. Retrieved from <http://www.education-consumers.com/briefs/May2002.asp>
- Stronge, J. (2002). *Qualities of effective teachers*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Sundli, L. (2007) Mentoring- a new mantra for education? *Teaching and teacher education: An international journal of research and studies*, 23(2), 201-214.
- Tucker, P., Stronge, J., & Gareis, C. (2002). *Handbook on teacher portfolios for evaluation and professional development*. Larchmont, NY: Eye on Education.
- Vandevoort, L., Amrein-Beardsley, A., & Berliner, D. (2004). National board certified teachers and their students' achievement. *Education Policy Analysis Archives*, 12(46), 7-38.
- Viadero, D. (2007). *Studies mixed on national certification for teachers*. Washington, D.C.: DC Association of Chartered Public Schools.
- Wayne, A., Chang-Ross, C., Daniels, M., Knowles, K., Mitchell, K., & Price, T. (2004). *Exploring differences in minority and majority teachers' decisions about preparation for NBPTS certification*. Arlington, VA: Stanford Research Institute International.
- Wiliam, D. (2008, July). Proceedings from the Pennsylvania Governor's for Innovative Teaching '08: *New models of teacher professional development*. Hershey, PA: Pennsylvania Department of Education.
- Wolf, K. P. (1991). *Teaching portfolios: Synthesis of research and annotated Bibliography*. San Francisco, CA: Far West Laboratory for Educational Research and Development.

- Wong, H. (2001). *The first days of school presentation*. Mountain View, CA: Harry Wong Publications.
- Wilcox, D. (1999). The national board of professional teacher standards: Can it live up to its promise? In *Better Teachers, Better Schools*. Washington, DC: The Thomas B. Fordham Foundation.
- Wright, S., Horn, S., & Sanders, W. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation, 11*, 57-67.
- Zhao, Y. (2009). *Catching up or leading the way*. Alexandria, VA: Association for the Supervision of Curriculum Development.
- Zimmerman, B., & Schunk, D. (2001). *Self-regulated learning and academic achievement: theoretical perspectives*. Hillsdale, NJ: Lawrence Erlbaum Associates.

## Appendix A

### *Incentives to NBC candidates by state.*

<u>State</u>	<u>Fee Incentive</u>	<u>Salary Incentive</u>	<u>Other Incentive</u>
Alabama	100% Paid	\$5000/yr	\$5000 for classroom use in first year
Alaska	NA	NA	NA
Arizona		\$2,500 \$5000/yr	NA
Arkansas		\$2,500 5000/yr	NA
California	NA	NA	\$20000 one time stipend for teaching in a low performing school
Colorado		\$1,000 \$1600/year for three years	\$3200 for teaching in a low performing school
Connecticut	NA	NA	NA
Delaware	NA	NA	NA
Florida	NA	10% bonus	10% bonus for mentors
Georgia	\$2000 reimbursed upon successful completion	10% of base salary	NA
Hawaii	100% reimbursed upon successful completion	\$5000/yr	\$5000 for teaching in "hard to staff" school and \$1500 upon completion of process
Idaho	NA	\$2000/yr for 5 years	NA
Illinois		100% \$3000/yr	\$1000 to mentor \$3000 to mentor in low performing schools
Indiana	NA	NA	NA
Iowa	NA	NA	NA
Kansas		\$2,000 \$1,000	NA
Kentucky		75% \$2000/yr	\$400 for expenses
Louisiana		\$850 \$5,000	NA
Maine	NA	\$3,000	NA
Maryland		State matches	
Massachusetts	2/3rds of the fee	\$2000 from local district	NA
Michigan	NA	NA	NA
Minnesota		\$2,500 NA	NA
Mississippi	NA	NA	NA
Missouri	Reimbursement upon completion	\$6000/yr	NA
Montana	\$750 for 100 teachers	\$5000 for districts participating in Career Ladder System	
Nebraska			\$3000 one time bonus for 20 NBCT's
Nevada	NA	NA	NA
New Hampshire		\$1,250 5%/yr	NA
New Jersey	NA	NA	NA
		\$625 NA	NA

New Mexico	NA		1.5 program unit stipend (\$5500)	NA
New York		\$2,500	NA	\$10000 to teach in low performing school and mentor
North Carolina		\$2,500	12% salary increase \$1000 for four years prior to 2007, \$1000/yr for after 2007	3 days of release time
North Dakota	50% for 17 Candidates		\$2500/yr for ten years	NA
Ohio		\$2,200		NA
Oklahoma		100%	\$5000/yr	NA
Oregon	NA		NA	NA
Pennsylvania		\$1,250	NA	NA
Rhode Island		\$1,000	NA	NA
South Carolina	100% loan forgivable upon successful completion or those in low performing schools		\$7500/yr \$1000 matching stipend for participating school districts	NA
South Dakota		100%		NA
Tennessee				
Texas	NA		NA	NA
Utah	Some assistance		NA	NA
Vermont		\$850	\$1000/yr for three years	NA
Virginia	NA		NA	NA
Washington	NA			\$5000 bonus for teaching in challenging school
Washington, D. C.	NA		NA	\$4000 one time bonus \$600 for certification expenses
West Virginia	50%, 100% upon completion		\$3500/yr	
Wisconsin	NA		\$2000 first yr, \$2500/yr for subsequent nine years	
Wyoming	NA		\$4000/yr	NA

---

## Appendix B

*State Rank of NBC Teachers, New NBC teachers, Percent Growth, Percent of NBC Teachers  
Compared to all Teachers in the State*

---

<u>State</u>	<u>Total Number of NBCT's in the State</u>	<u>Number of new NBC's in 2010</u>	<u>Percent growth 09 to 10</u>	<u>Percent of NBCT's to all teachers in the state</u>
North Carolina	17,957	2,277	15.50%	18.71%
Florida	12,670	273	2.10%	7.15%
South Carolina	6,498	498	7.74%	13.26%
Pennsylvania	769	124	19.20%	0.59%

---

## Appendix C

*Twenty five highest total number of NBC's and state incentive programs ranked highest to lowest.*

<u>State</u>	<u>Total Number of NBC's</u>	<u>Salary Incentive</u>	<u>Other Incentive</u>
North Carolina	14,211	12% salary increase	3 days of release time
Florida	12,670	10% bonus	10% bonus for mentors
South Carolina	6,498	\$7500/yr	NA
California	4,240	NA	\$20000 one time stipend for teaching in a low performing school
Illinois	3,191	\$3000/yr \$2500/yr for ten	\$1000 to mentor \$3000 to mentor in low performing schools
Ohio	2,932	years	NA
Mississippi	2,897	\$6000/yr	NA
Washington	2,717	\$5,000	\$5000 bonus for teaching in challenging school
Georgia	2,503	10% of base salary	NA
Oklahoma	2,307	\$5000/yr	NA
Virginia	1,765	NA	NA
Kentucky	1,608	\$2000/yr	\$400 for expenses
Alabama	1,546	\$5000/yr	\$5000 for classroom use in first year
Louisiana	1,389	\$5,000 State matches \$2000	NA
Maryland	1,364	from local district	NA
Arkansas	1,116	5000/yr	NA
New York	880	NA	\$10000 to teach in low performing school and mentor
Iowa	627	NA	NA
Wisconsin	589	\$2000 first yr, \$2500/yr for subsequent nine years	
Arizona	556	\$5000/yr	NA
Pennsylvania	496	NA	NA
Missouri	490	\$5000 for districts participating in Career Ladder System	
Massachusetts	474	NA	NA
Texas	472	NA	NA
Delaware	430	NA	NA

## Appendix D

November 18, 2010

Dear National Board Certified Teacher,

My name is Jay Starnes and I am a doctoral student at East Stroudsburg University. I am currently conducting a study focusing on the factors which led teachers to successful attainment of a National Board Certification in Pennsylvania. The study is part of my Doctoral Dissertation and the information obtained from the study will be used solely for the purpose of better supporting candidates through the National Board Certification process.

An informed consent form which explains the purpose of the study, potential risks, confidentiality procedures, etc. is enclosed. It is assumed that you give your informed consent if you log on to the survey.

If you volunteer to participate in the study, please go to the following website prior to December 15, 2010: <https://iup.qualtrics.com/ControlPanel/>

Enter the following user name:       SAMPLE

Enter the following password:       EXAMPLE

Follow the prompts.

After completing the survey, you will be asked if you are willing to participate in a phone interview. Approximately 15 participants will be selected for phone interviews. Phone interviews should take approximately 20 minutes.

Please feel free to contact me if you have any questions about the survey or the research I am conducting about National Board Teachers.

Yours in Education,

Ronald Jay Starnes  
2552 Route 6  
Hawley, PA 18428  
570-226-4557x5

[starneja@wallenpaupack.org](mailto:starneja@wallenpaupack.org)

## Appendix E

### East Stroudsburg University

#### **CONSENT TO PARTICIPATE IN RESEARCH**

*What motivated Pennsylvania teachers to successfully attain National Board Certification?*

You are asked to participate in a research study conducted by Ronald Jay Starnes, a student in the Doctoral program in Leadership Studies and Administration from East Stroudsburg University. You were selected as a possible participant in this study because you successfully completed the National Board Certification process. Your participation in this research study is voluntary.

#### **PURPOSE OF THE STUDY**

The purpose of this study is to identify the motivating factors that lead to the successful attainment of National Board Certification for teachers in Pennsylvania.

#### **PROCEDURES**

If you volunteer to participate in this study, we would ask you to do the following:

- Complete a NBPTS motivation survey.
- Participate in a phone interview.

#### **POTENTIAL RISKS AND DISCOMFORTS**

Personally identifiable information may be used to collect information necessary to validate the NBPTS motivation survey. The information obtained from the surveys and focus groups is for the sole use of the researcher and will not be released to any third party in any disaggregated form.

#### **POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

Your participation in the research may better enable those working with the National Board for Professional Teaching Standards to successfully support future National Board Candidates.

#### **PAYMENT FOR PARTICIPATION**

You will not receive any payment for participation in the study or phone interview.

#### **CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law.



Confidentiality will be maintained by means of information stored on a secure network which is protected by a password.

## **PARTICIPATION AND WITHDRAWAL**

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind.

## **IDENTIFICATION OF INVESTIGATORS**

If you have any questions or concerns about the research, please feel free to contact: Ronald Jay Starnes, 2552 Route 6, Hawley, PA 18428 or 570-226-4557x5.

Shala E. Davis, Ph.D., IRB Chair, East Stroudsburg University, 200 Prospect Street, East Stroudsburg, PA 18301-2999, 570-422-3336

## Appendix F

### Telephone Interview Question Form

NBCT Name \_\_\_\_\_ Interviewer \_\_\_\_\_

NBCT Phone Number \_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_

Interview Start Time \_\_\_\_\_ Interview End Time \_\_\_\_\_

1. What motivated you to apply for NBPTS Certification? (Improved Instruction, Recognition, Leadership, Improved Job Status/Money, Other)

2. What were the factors which led you to complete the certification process?

3. Did your motivation for completing the NBC change during the process?

4. Did you change during the NBC process?

5. What was the most difficult part of the application process?

6. Considering the entire application process, what advice would you have for someone just beginning the process?

7. What could your school or the NBPTS done to better support you through the application process?

8. Were there times during the application process when you thought about quitting? Why didn't you quit?

## Appendix G

### Pennsylvania National Board for Professional Teaching Standards Motivation Survey

#### National Board Certification Motivation Survey

1

Gender

2

Race

3

Teaching Experience ADD 1-5, 6-10, 11+

4

Certification ELEMENTARY SECONDARY

5

Subject/s Taught

6

Highest Degree Earned

7

SES Status of the school in which you currently teach (% free and reduced lunch)

8

National Board Certification Date

9

AYP Status of your school this school year

Please respond to the following statements by selecting strongly disagree, disagree, neutral, agree or strongly agree.

I pursued National Board Certification because...

10

I wanted to improve my teaching skills.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

1

2

3

4

5

11

I wanted to be recognized for my teaching.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12

I wanted to become a teacher leader.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13

I wanted to take advantage of the school district financial incentives provided to National Board Certified Teachers.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14

I wanted to better prepare my students.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15

I wanted to have my teaching experience validated.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16

I wanted to become an administrator.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17

I wanted to strengthen my resume.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18

I wanted to measure myself against national teaching standards.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19

A colleague recommended that I apply.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20

An administrator recommended that I apply.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21

I wanted to teach in another state and was seeking a national credential.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22

I wanted to work with colleagues to examine and improve my teaching practice.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23

I wanted to collaborate with a colleague/s.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24

I wanted to prepare for a leadership role in my school.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

25

I wanted the act 48 hours associated with the certification.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26

I wanted to revitalize my teaching.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

27

I wanted to have my teaching evaluated by a national organization.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



28

I wanted to prepare for an administrative role.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

29

I wanted to increase my salary.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

30

The candidate support program was part of a program of study in which I was enrolled.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

31

I wanted to energize my teaching career.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

32

I wanted to prepare myself to be a department chair.

Strongly Agree Agree Neutral Disagree Strongly Disagree

1

2

3

4

5

33

I wanted to make myself more marketable as a teacher.

Strongly Agree Agree Neutral Disagree Strongly Disagree

1

2

3

4

5

34

I wanted to improve professionally.

Strongly Agree Agree Neutral Disagree Strongly Disagree

1

2

3

4

5

35

I wanted to gain increased respect as a teacher.

Strongly Agree Agree Neutral Disagree Strongly Disagree

1

2

3

4

5

36

I wanted to prepare myself to become a central office administrator.

Strongly Agree Agree Neutral Disagree Strongly Disagree

1

2

3

4

5

37

I wanted a portable teaching credential.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

38

I started with the "Take One" program.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

39

I wanted to be valued in my school community.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

40

I wanted to become a better curriculum writer.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

41

I wanted to meet the professional development mandates of the state, district or school.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input checked="" type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5

42

I wanted to improve student achievement in my classroom.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5

43

It was part of a master's degree program.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5

44

I wanted to work collaboratively with other professionals.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input checked="" type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5

45

It was part of a doctorate degree program.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5

---

46

I thought the process was valuable.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

1

2

3

4

5

---

47

I am willing to participate in a phone interview about my experience in the National Board Certification process.

YES

NO

---

48

Describe your main reason for pursuing National Board Certification.

1

2

3

---

49

Describe what impact, if any, that NBPTS certification has had on your teaching behavior.