

# Professional Degree Programs for the Development of Accomplished Teachers: A Case for the National Board Certification Process

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This study examines how teachers' knowledge of teaching and instructional practices was affected by their participation in a graduate-level program designed to prepare teachers for National Board certification while earning a master's degree in education. Four cohorts of participants were studied over a 5-year period. Quantitative and qualitative findings indicate that program participation affected four aspects of the teachers' development as professionals: (1) understanding the importance of linking theory and practice, (2) engaging in cycles of inquiry for transforming practice, (3) actively participating in collaborative learning with their peers, and (4) adopting a new professional identity as teacher leaders.

**Keywords:** *National Board certification, professional degrees, teacher professional development*

## Introduction

Research has shown that the quality of teaching matters in carrying out the demands of high standards in the classroom (Garet, Porter, Desimone, Birman, & Yoon, 2001). In addition, research has identified professional development as a key factor in improving the quality of K–12 teaching (Desimone, 2009); therefore, in order for teachers to reach and maintain a high level of performance that impacts student learning, they need sustained, high-caliber opportunities for growth and for professional collaboration with their peers (Guskey, 2003).

Based on literature reviews and accounts of “successful” professional development programs, a number of educational scholars have produced lists of essential features of high-quality professional development (Borko, 2004; Desimone, 2009; Desimone, Porter, Garet, Yoon, & Birman, 2002; Garet et al., 2001). A consensus regarding key characteristics of effective professional development was described by Desimone et al. (2002) as centering on “how students learn content; in-depth, active learning opportunities; links to high standards; opportunities for teachers to engage in leadership roles; extended duration; and the collective participation of groups of teachers from the same school, grade, or department” (p. 82). This consensus was based upon the results of a 3-year longitudinal study of 30 schools and 207 teachers.

Certification by the National Board for Professional Teaching Standards (NBPTS) offers recognition and professional and leadership development to excellent teachers. In fact, the certification process incorporates the key characteristics of effective professional development as they are framed in the National Board's Five Core Propositions (National Board for Professional Teaching Standards [NBPTS], 2001): (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; and (5) teachers are members of learning communities (see Appendix A for full descriptions).

The National Board certification process requires teachers to engage in activities that align with key features of effective professional development (Sato, Chung, & Darling-Hammond, 2008). Results from a body of research over the past two decades indicated that National Board teacher certification was a high-quality professional-development experience for candidates. The most recent studies indicated that participation in the process was a meaningful professional-development experience even for those teachers who did not achieve certification. Despite a large body of research that shows the effectiveness of National Board certified teachers (NBCTs) and the power of the certification process as a professional-development experience, little research has examined professional degree programs designed to help prepare candidates for National Board certification (Robinson, 2011).

The national pass rate for National Board certification has ranged between 33% and 40% over the past 10 years (Singleton, 2010). In addition, the majority of national programs that support candidates for National Board certification are not connected to any degree program. An expansive body of research suggests that the National Board certification process may offer a promising opportunity for investigation, not solely as a way to identify more effective teachers but as a means to develop accomplished teaching as a result of the professional learning that appears to accompany engagement in the certification process (Lustick & Sykes, 2006; Sato, 2000; Sato et al., 2008; Tracz et al., 1995). Educators who are charged with the professional development of teachers could also benefit from an investigation of the components of the National Board certification process that contribute to teachers' learning and from the integration of these components into professional degree programs. The purpose of the present 5-year research study was to examine how teachers' knowledge of teaching and instructional practices would be affected by their participation in a new graduate-level teacher-education program. The program was designed to prepare teachers to sit for National Board certification as part of their progress toward a master's degree in education with an emphasis in curriculum and instruction.

## **Related Literature**

Over the past 15 years, many studies have demonstrated the greater effectiveness of NBCTs in comparison to their peers. More than 150 studies have examined National Board certification; the vast majority found that National Board certification made a significantly measurable positive impact on teacher performance and on student learning, engagement, and achievement (Center for Teaching Quality, 2008). This body of research examined the impact of National Board certification on student performance, teacher retention, and the quality of assignments. The results of these studies have been very positive. NBCTs demonstrated in-depth knowledge of teaching skills and subject content, routinely sought educational strategies and materials that better meet students' needs (Dagenhart, 2002; Petty, 2002), created more challenging curricula, presented subject matter in greater depth, and provided better feedback to students than did noncertified teachers (Bond, Smith, Baker, & Hattie, 2000). Furthermore, research suggested that NBCTs possess more of the characteristics of "expert" teachers than do noncertified teachers (McColskey & Stronge, 2005; NBPTS, 2001; Williams & Bearer, 2001).

A multiyear study of 600,000 student records (Goldhaber, Perry, & Anthony, 2004) found that National Board-certified teachers did a measurably better job in the classroom and that their students improved an average of 7% on year-end math and reading tests than did students whose teachers attempted but failed to achieve certification. Data also showed gains of as much as 15% among younger and lower-income students (Goldhaber et al., 2004). In 48 comparisons, students of National Board-certified teachers surpassed students of noncertified teachers in almost three-quarters of cases. On average, learning gains were equivalent to about an extra month in the classroom, and students of National Board-certified teachers exhibited deeper learning outcomes more frequently than did students of noncertified teachers (Bond et al., 2000; Smith, Gordon, Colby, & Wang, 2005; Vandervoort, Amrein-Beardsley, & Berliner, 2004). Furthermore, a number of studies have revealed that the National Board certification process exerts a significant influence on teacher mentoring, leadership, team-building, professional development and evaluation, curriculum development, efficacy, and overall school leadership (Frank et al., 2008; Freund, Russell, & Kavulic, 2005; Robinson, 2011).

In addition to studies that indicated the greater impact that National Board-certified teachers have on student learning, a growing body of research investigated the impact of the National Board certification process as a professional-development opportunity. In fact, Lustick and Sykes (2006) found that the National Board certification process was a powerful professional-development experience for teachers and that teachers who pursued certification showed improvement in their practice regardless of whether they achieved certification. After reviewing research on National Board certification, these authors concluded that National Board certification was a “transformative experience” for many teachers when compared to other professional-development options. Emerging research suggests that teachers who pursue National Board certification consider staying in the classroom longer than do their peers and gain new enthusiasm for the profession as a result of completing the certification process (NBPTS, 2007).

## Methodology

### Context

The graduate program in education that is the subject of this study was offered through a northern California university and was implemented over 5 years with four cohorts of teachers ( $N = 56$ ). In selecting participants, all students eligible for the master's program were recruited without further screening for those the researchers believed could achieve National Board certification. In keeping with NBPTS guidelines, all applicants to the program were required to have at least 3 years of teaching experience. Unlike the recruitment process for other master's programs, recruitment for this program began at the district level. That is, four districts believed to have an interest in National Board-certified teachers were identified and informational meetings were held at their sites.

### The Program

The master's program was designed to provide a focus for study that aligned research, classroom practice, and National Board standards and offered candidates the support and mentoring necessary to success in achieving National Board certification. Research on teachers' classroom practices and changes to those practices are the focus of the National Board certification process. The master's

program was designed and taught collaboratively by a team of university faculty and National Board-certified teachers who served as adjunct faculty. Participating faculty attended a 1-day professional-development session led by a National Board-certified teacher in order to ensure that each instructor had sufficient background in National Board certification and an in-depth understanding of National Board standards and Five Core Propositions. Over the course of a year, faculty worked together to design a cohesive program that supported students in preparing for the National Board certification process as a component of their work toward a master's degree in education with an emphasis in curriculum and instruction.

The department's traditional master's program provides six 3-unit core courses and a 12-unit elective component. Using National Board teacher-certification standards and the learning outcomes developed for the new program, the faculty developed four new elective courses to satisfy the elective component: Introduction to National Board Certification, Writing for National Board Certification, Key Issues in National Board Certification, and National Board Portfolio Preparation (see Appendix B).

Faculty reviewed the ways in which core courses were typically taught and determined ways to incorporate information related to National Board certification. During this process, faculty also identified how the program's learning outcomes could be met within each course. Faculty then met to discuss how the content of the electives could be reinforced within the six core courses. In addition, faculty worked together to design the sequence of the courses: first with regard to the placement of each course within the entire program and then in light of whether courses should occur consecutively or concurrently. Finally, in order to provide greater continuity, faculty teaching during the same semester agreed to collaborate to plan course activities and assignments.

The program was offered over a four-semester-plus-one-summer-session timeframe. Two courses were offered each semester, one on a weekday afternoon after school and the other in three Friday evening and all-day Saturday sessions. This schedule, combined with the cohort nature of the program and the onsite delivery model, resulted in a cohesive, supportive, reasonable learning environment for participants who were also teaching full-time.

## Research Questions

The study sought to answer the following research questions:

1. Following participation in the program, what change, if any, occurs in teachers' knowledge of the instructional components emphasized in NBPTS?
2. Following participation in the program, how, if at all, do teachers integrate the instructional components emphasized in NBPTS into their teaching?
3. How do program participants' first- and second-attempt certification rates compare to national certification rates?
4. What does a master's program combined with an emphasis on National Board certification afford for teachers' professional growth?

## Data Collection

Both quantitative and qualitative data were gathered across the 5 years of the master's program to evaluate candidates' experiences and to determine whether improvements were needed in program quality, especially with regard to achievement of desired outcomes. More specifically, data from

surveys, interviews, observations, and program documents were collected and analyzed periodically throughout the program and at the end of each cohort's 2-year enrollment.

### ***Quantitative Data Collection***

Quantitative data from all cohorts were gathered pre- and postenrollment using a knowledge/use scale (see Appendix C). This instrument, which was based on National Board standards and the Five Core Propositions, was designed to assess candidates' knowledge and use of information and to allow us to determine whether changes occurred in that knowledge and use between the beginning and the end of the program. In addition, the first- and second-attempt pass rates of each cohort were recorded.

### ***Qualitative Data Collection***

Qualitative data were gathered from candidates to answer the question: What does a combined master's program with an emphasis on National Board certification afford for teachers' professional growth? Data were collected from multiple sources, including semistructured interviews, teachers' written reflections, and researchers' field notes. Candidates' written reflections were gathered three times during their enrollment in the program.

## **Data Analysis**

### ***Quantitative Data Analysis***

Data from the knowledge/use scale were organized in multiple ways. First, each of the individual items measured by the survey was examined. Within these items, descriptive statistics for the mean knowledge and use reported by candidates were calculated. (Descriptive statistics are provided in Table 1 and show an increase both in knowledge and use reported by candidates for each of the 15 items.)

**Table 1: Pre/Post Descriptive Statistics for Survey Items Spilt by Knowledge and Use**

Item	Knowledge		Use	
	Pre	Post	Pre	Post
Knowledge and skills in recognizing individual differences in students and adjusting practice accordingly	3.56 0.7	4.89 0.32	3.56 0.62	4.89 0.32
Knowledge of how students develop and learn	3.33 0.77	4.89 0.32	3.33 0.77	4.94 0.24
Knowledge of practices that help students to respect and appreciate individual and group differences	3.56 0.78	4.94 0.24	3.5 0.79	4.78 0.43
Knowledge of the importance of students' family and cultural backgrounds and experiences in designing appropriate instruction	3.5 0.79	4.94 0.24	3.11 0.76	4.78 0.43
Knowledge of how subject area knowledge is created, organized, and linked to other disciplines	3.67 0.69	4.89 0.32	3.56 0.62	4.89 0.32
Knowledge of instructional strategies that provide students with multiple paths needed to learn the central concepts in each school subject	3.5 0.79	4.89 0.32	3.61 0.92	4.94 0.24
Knowledge of how to convey a subject to students	3.89 0.76	4.94 0.24	3.72 0.75	4.44 0.7
Knowledge of multiple methods to meet instructional goals	3.78 0.73	4.78 0.43	3.67 0.84	4.67 0.49
Knowledge of the skills necessary to orchestrate learning in group settings	3.5 0.71	4.94 0.24	3.44 0.7	4.89 0.32
Knowledge of practices that engage students in learning within and across disciplines	3.67 0.84	4.67 0.59	3.44 0.92	4.61 0.78
Knowledge of practices that help students understand how the subjects they study can be used to explore important issues in their lives and the world around them	3.50 0.86	3.94 0.73	3.61 0.78	3.83 0.38
Knowledge and understanding of the strengths and weaknesses of different assessment methods	3.44 0.62	4.94 0.24	3.11 0.83	3.44 0.51
Knowledge of how to analyze, evaluate and reflect on classroom practice as a tool to strengthen effectiveness and quality of classroom instruction	3.61 0.85	4.94 0.24	3.44 0.92	4.78 0.43
Knowledge of how to initiate positive interactive relationships with families as they participate in the education of their children	3.78 0.73	4.72 0.46	3.56 0.70	4.22 0.43

*Note:* Top number is mean and bottom number is standard deviation for each item.

The items were then correlated with the five National Board Core Propositions (see Appendix C for Core Propositions) in the following way: items 1–4 aligned with Core Proposition One, items 5–7 aligned with Core Proposition Two, items 8–13 aligned with Core Proposition Three, item 14 aligned with Core Proposition Four, and item 15 aligned with Core Proposition Five. Within these propositions, descriptive statistics for mean knowledge and use based on candidates' self-reports were calculated.

A series of *t*-tests were performed to compare pre- and postenrollment standard scores using a Bonferroni correction. A statistically significant mean increase in knowledge and use was observed for each of the Core Propositions. Table 2 shows pre- and postenrollment mean scores and standard deviations for each proposition split by knowledge and use as well as *t*- and *p*-values for pre/post comparisons.

**Table 2: Pre/Post Proposition Analysis Scores for Core Propositions Split by Knowledge and Use**

	<i>Core Proposition 1</i>				<i>Core Proposition 2</i>				<i>Core Proposition 3</i>			
	Knowledge		Use		Knowledge		Use		Knowledge		Use	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Mean	3.49	4.92	3.38	4.85	3.69	4.91	3.63	4.76	3.57	4.65	3.44	4.33
<i>SD</i>	0.76	0.28	0.73	0.35	0.74	0.29	0.76	0.42	0.76	0.45	0.84	0.50
<i>t</i>	-13.5		-12.24		-10.07		-7.69		-7.53		-6.01	
<i>p</i>	< .0001		< .0001		< .0001		< .0001		< .0001		< .0001	
	<i>Core Proposition 4</i>				<i>Core Proposition 5</i>							
	Knowledge		Use		Knowledge		Use					
	Pre	Post	Pre	Post	Pre	Post	Pre	Post				
Mean	3.61	4.94	3.44	4.78	3.78	4.72	3.56	4.22				
<i>SD</i>	0.85	0.24	0.92	0.43	0.73	0.46	0.70	0.43				
<i>t</i>	-6.41		-5.57		-4.63		-3.43					
<i>p</i>	< .0001		< .0001		< .001		< .001					

In addition to the pre/post knowledge-use data, data on participants' pass rates were gathered. The overall pass rate on the first attempt was 62%; when all candidates who were successful on either the first or second attempt were included, the rate increased to 74%. This compares to a national rate of 40% and 50% respectively (Singleton, 2010). Because any applicant who met the master's program admission requirements was able to participate in this program without prescreening (which is used in many National Board certification-preparation programs), these results are even more impressive.

### **Qualitative Data Analysis**

Grounded theory methodology—an analytic approach that employs a coding system and comparative analysis to identify themes (Strauss & Corbin, 1990, 1998)—guided the overall design of qualitative data analysis. Recorded interviews were reviewed numerous times, and the themes that emerged from each interview were noted. Teacher reflections, field notes, and transcripts of interviews were also read multiple times, and recurring themes were documented. Perusal of the data for emerging themes and categories was followed by revision of those themes and categories. This process was repeated for three rounds of analysis.

Coding techniques were implemented to organize data from the analysis of individual interviews and determine the major themes that emerged from the various data-collection methods. Glesne (2006) stresses that “coding is a progressive process of sorting and defining and defining and sorting those scraps of collected data that are applicable to your research purpose. By putting like minded pieces together into data clumps, you create an organizational framework” (p. 152).

Data were categorized and specific identifying codes were generated; as new data were incorporated, categories and codes were refined and renamed. Once specific themes were determined and codes established, the information obtained from each of the interviews and reflections was merged into one document that contained all of the themes and supporting comments made by the participants. Researchers created conceptual labels that were grouped by similarity to form categories and subcategories. The coding process stimulated comparative questions that guided researchers during data collection.

Once the phase of axial coding began, categories were further developed by testing the data against the relationships found in the categories and subcategories. For purposes of this study, axial coding involved the generation of categories and the investigation of possible correlations among individual interviews, reflections, and field notes. During this second level of coding, the focus shifted to significant words and phrases and to the patterns or themes that emerged from them. A constant comparative analysis was implemented to determine similarities and differences in themes (Strauss & Corbin, 1990).

Once preliminary coding was accomplished, the data were reviewed and subjected to selective coding. Dominant and subordinate themes were identified and the analytical strategy of theme content was applied. During this process, all subcategories were merged around central categories. This process allowed the researcher to provide descriptive details within the major categories that had emerged during data analysis.

## **Results**

### **Quantitative Findings**

Data from the knowledge/use scale showed that candidates' knowledge and use of all items (as aligned with the National Board's Core Propositions) increased significantly over the course of the program. The greatest change in reported knowledge and use was related to Core Proposition One: Teachers are committed to students and their learning. The smallest change in reported knowledge and use (though still statistically significant) was in Core Proposition Five. Further data analysis showed, in comparison with other areas, that candidates did not feel they had grown as much in their ability to initiate positive interactive relationships with the families of the children they taught. Core Proposition Three also showed less growth than did Propositions One, Two, and Four. In addition, Table 1 indicates that, as compared with other areas, candidates did not report as much growth in their ability to use new understandings of the strengths and weaknesses of assessments in classroom practice.

### **Qualitative Findings**

Qualitative data analysis indicated that participation in the master's program affected four aspects of teachers' development as professionals: (1) understanding the importance of linking theory and



practice, (2) engaging in cycles of inquiry for transforming practice, (3) actively participating in collaborative learning with their peers, and (4) adopting a new professional identity as teacher-leaders.

### ***Understanding the Importance of Linking Theory and Practice***

As they began to understand how research findings could be put into practice in the classroom, candidates came to value research and theory much more than they had prior to the program. They attributed this new respect for research to the strong connection between the master's program core courses and the National Board elective courses.

The courses that were part of the master's program gave me an opportunity to learn more about existing research on effective teaching methods. In our courses we spent a lot of time discussing (...) research and the connection to our classroom practice. For the first time I came to value research and to see how important it is for improving practice. I really appreciated the connections between research and practice made in the master's courses and in the National Board elective courses. *Jayne – Interview*

In addition, many comments from candidates showed that the focus on research in their master's courses provided them with a structure for engaging in cycles of inquiry about their own classroom practice.

The introduction to research course was very useful for me. In this course I learned how to ask good research questions that could guide what data I would gather and how I might analyze that data. This process really helped think about questions to ask in looking at my own classroom practice. I began to understand more about how to analyze and use data to shape my teaching and thinking about it in this way really helped me with my National Board entries. *Jake – Reflection*

### ***Engaging in Cycles of Inquiry for Transforming Practice***

One of the National Board's Core Propositions states, "Teachers think systematically about their practice and learn from experience" (NBPTS, 2002, p. 4). This proposition emphasizes the importance of reflection in becoming an accomplished teacher. In keeping with this proposition, candidates for National Board certification were asked to write reflections for each of the four entries in their culminating portfolios. What emerged through the program was an increase in candidates' ability to reflect on and change their teaching practices based on a systematic investigation of classroom successes and failures.

I think what participation in this program has done has made me think much more deeply about my teaching. I think more purposefully about the goals for my lesson, what I want students to learn and how to design my lessons so they do learn. The reflections we have been writing for the National Board portfolio have forced me to reflect in an ongoing way and change my practice on a more regular basis. *Sandra – Interview*

Candidates also reported on the multiple cycles of inquiry in which they engaged as part of their classroom practice and on the degree to which this process became a habitual practice. The data

showed that candidates appreciated the multiple opportunities within the program to construct a theoretical understanding of their skills and knowledge through continuous inquiry and improvement.

Being in this program has made me really start looking more at my students' work, analyzing that and using that analysis to plan my instruction. Then, I could go back and reteach things for students who were still struggling. This has become a regular approach for me and I find the process really helpful. Working with my peers and the instructors in the program has provided me a method for looking at my practice and new skills for using student work to inform my teaching. *Janice – Interview*

### ***Actively Participating in Collaborative Learning With Their Peers***

The data revealed that the master's program candidates began to view and value collaboration differently than they did when they entered the program. The majority of candidates reported a commitment to continuing this collaboration beyond the program.

I think very differently about what it means to collaborate. Working with colleagues on the design of a lesson or unit and sharing our reflections on what worked or did not work is different (from) the way I used to collaborate. Before going through program we would share lesson ideas or activities but we would not work so closely together on designing our classroom instruction. *Gloria – Reflection*

Candidates also reported valuing the cohort nature of the program, which allowed them to build strong professional and personal relationships with their peers and provided opportunities for reflection and participation in professional dialogue with colleagues. This strong learning community offered a safe environment in which to offer constructive criticism of colleagues' work, which participants often did not feel comfortable doing in other contexts. The need for such interaction, they reported, was increased by the "high stakes" nature of the National Board certification process; though they were unsure how feedback and criticism could otherwise have been incorporated without the structured time the master's program offered them.

Talking about my teaching with university faculty and other teachers was a profoundly transforming experience. Having this group view videos of my teaching and then having a discussion about what happened and what I might have done differently forced me to analyze my teaching in a way I (had) never done before. We were all stressed and challenged by the tasks and there was no time to worry about the fact that your peers were watching you teach. It was an amazing experience that stretched my thinking. *Jessica – Interview*

### ***Adopting a New Professional Identity as Teacher-Leaders***

Throughout the process, master's candidates demonstrated a changing perspective on their own professional lives both within and beyond the classroom. They came to view themselves as leaders in their field with much to contribute to their students, their colleagues, and their communities.

I have come to really see the value in working with other teachers. I have always valued input from other teachers, but now I also see the value of providing others with my input. I see myself differently now with more to contribute to the others in this profession. I also am seen differently within my district and I feel like I am a valuable resource for the school and the district. *Anita – Interview*

A number of teachers who had completed the programs in the first two cohorts became National Board support providers for others pursuing certification. Two became instructors in the master's program.

This program really empowered me as a professional. Once I received my certification I volunteered my time as a support provider in my district. One reason I wanted to do this is because the support I received was so important for my own success. But, honestly, I also thought this would be another way for me to continue collaborating with other teachers and improving my own teaching. *Rachel – Reflection*

## Discussion and Implications

Recently, the NBPTS appointed Ronald Thorpe as its new chief executive officer. Under Thorpe's leadership, the board is expanding its programs and services to encourage school transformation and engage the nation's best teachers in that process. The data from this 5-year study suggest that professional degree programs that prepare and support teachers for National Board certification can help more teachers become certified. In this case, teachers were not recruited into the program based on any measure of their potential for success in pursuing National Board certification, yet the certification rate was much higher than the national average.

Even for the teachers in the program who did not achieve National Board certification, or in the case of the few teachers who did not submit a portfolio, the master's program with an emphasis in curriculum and instruction (which incorporated the National Board's standards and Five Core Propositions) provided them with an opportunity to deepen their knowledge, use important instructional practices, and adopt a new professional identity as teacher-leaders. Educators should therefore look to the National Board certification standards and portfolio when designing master's or professional-development programs for teachers.

Data from the four cohorts of teachers who went through the program confirmed the researchers' belief that the key principles around which the program was designed—all of which were aligned with the Five Core Propositions and standards of the National Board certification process—were central to the development of the accomplished teaching that was witnessed among the teacher participants. Namely:

- Candidates participated in the program in district and school-based cohorts.
- Cohorts were all focused on the completion of an intellectually challenging task, the National Board portfolio, which afforded multiple opportunities for professional dialogue about teaching and learning.
- National Board rubrics and standards provided candidates and instructors with a common language to use in discussing teaching and practice.

- Master's-level courses allowed instructors to create meaningful linkages between theory and practice and helped candidates develop strategies for examining and reconceptualizing their approach to teaching.

These key design principles fostered the development of a strong learning community among the cohorts and, along with the data from this study, have significant implications for educators who seek to help more teachers become board-certified, invest in the professional development of teachers through the National Board certification process, or design professional degree programs that lead to highly accomplished teaching.

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## Appendix A

### The Five Core Propositions

#### Proposition 1: Teachers Are Committed to Students and Their Learning

- National Board certified teachers (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 classrooms.
- 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.



## Appendix B

### Program Courses

#### ***EDTE 240 – Introduction to National Board Certification***

In this initial course, students will explore the purpose and potential benefits of the National Board certification process, including the Five Core Propositions. Through analysis of National Board standards, students will be able to select a certification area and begin to apply the standards in their own classroom practices and professional activities.

#### ***EDTE 250 – Educational Research***

Students will study qualitative and quantitative methods in the development of reliable knowledge in the field of education. Includes identification and formulation of research problems, research designs, and presentation of reports representative of different research strategies.

#### ***EDTE 241 – Writing for National Board Certification***

Students will write about classroom practice and professional activities in descriptive, analytical, and reflective modes. Students will be coached to write clear, organized, and logical descriptions; to make visible their reasons, motives, and interpretations for classroom decisions; and to project future actions based upon analysis of past practices.

#### ***EDTE 251 – Education for a Democratic, Pluralistic Society***

This course offers an advanced study of social and psychological issues that need to be considered in education relating to the client, the educator, the community, and society. It addresses the implications of theories of learning, assessment, individual differences, and social/political influences.

#### ***EDTE 227 – Seminar in Curriculum and Instruction***

This seminar offers individual and group study of current programs, issues, trends, and research in elementary and secondary instruction and curricular areas.

#### ***EDTE 226 – Seminar: Strategies for Teachers***

This seminar focuses on analyzing various teaching strategies used in classrooms, K–12. Teaching strategies will be analyzed to identify teacher competencies and learning outcomes.

#### ***EDTE 242 – Key Issues in National Board Certification***

Through action research, professional reading, and guided discussions, students will explore key elements of the National Board standards, including engaging student learning, assessment, decision-making in lesson design, identifying essential “big ideas” in content areas, and community connections.

#### ***EDTE 290 – Seminar for Culminating Experience***

This seminar focuses on topics, elements, and expectations to be included in the culminating experience: defining and narrowing a topic for study, abstract writing, differentiation of primary/secondary sources of evidence, development of organizational schemes for a literature review, computer searching, format requirements, time management, range and breadth of evidence for an adequately comprehensive review, connecting the review and project/thesis, writing style and

quality, revisions and critical feedback, social/psychological dimensions of thesis/project process, and data analysis and statistics help on-campus for thesis.

***EDTE 243 – National Board Portfolio Preparation***

Students will receive collaborative support in planning classroom-based portfolio entries. Students will explore the videotaping techniques that will best showcase their classroom practice and receive support in the analysis of the tapes and will create a timeline for completion of the process.

***EDTE 505 – Culminating Experience: Curriculum and Instruction***

Credit is given upon successful completion of a portfolio of professional practices for the master's in education in curriculum and instruction. The portfolio of professional practices in this program will have a special emphasis on National Board standards and Five Core Propositions.

## Appendix C

### Department of Teacher Education

**Name:** \_\_\_\_\_

#### **Survey Directions:**

We are conducting a survey as part of this program. Please answer all the questions carefully. We will be asking you these questions again at different times during your program. In order to match your responses, pre and post, we need your name on the survey; however, all participant responses will be combined, and no effort will be made to use or report any individual responses.

Below is a list of key components that have been developed from the National Board Five Core Propositions and standards. Please read each of the components and then rate your level of knowledge of each component by circling your response on the five-point *knowledge scale*. Next, rate your level of use of this content as a teacher educator by circling your response on the five-point *use scale*.

The five-point knowledge scale should be interpreted as follows:

1. **Low knowledge** (I know very little about this topic.)
2. **Some knowledge** (I know something, but not much about this topic.)
3. **Moderate knowledge** (I know something about this topic but I could learn more.)
4. **Moderately high knowledge** (I feel I know more than the average teacher about this topic.)
5. **High knowledge** (I know a great deal about this topic.)

The five-point use scale should be interpreted as follows:

1. **Low use** (I almost never use this component.)
2. **Some use** (I occasionally use this component.)
3. **Moderate use** (I sometimes use this component.)
4. **Moderately high use** (I use this component more than the average teacher.)
5. **High use** (I use this component very frequently.)

The *Journal of Educational Research and Practice* provides a forum for studies and dialogue that allows readers to better develop social change in the field of education and learning. Journal content may focus on educational issues of all ages and in all settings. It also presents peer-reviewed commentaries, book reviews, interviews of prominent individuals, and additional content. The objectives: We publish research and related content that examines current relevant educational issues and processes aimed at presenting readers with knowledge and showing how that knowledge can be used to impact social change in educational or learning environments. Additional content provides an opportunity for scholarly and professional dialogue regarding that content's usefulness in expanding the body of scholarly knowledge and increasing readers' effectiveness as educators. The journal also focuses on facilitating the activities of both researcher-practitioners and practitioner-researchers, providing optimal opportunities for interdisciplinary and collaborative thought through blogging and other communications.

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