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Wyoming Teachers' Perceptions of Teacher Quality: Effects of National Board Certification and Teacher Education Level

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Abstract. *Policymakers, educators, and researchers agree that teacher quality is critical to student learning. The search for comprehensive measures of teacher quality encompassing all outcomes expected of schools must remain at the forefront of research and policy discussions. A thematic research study focusing on Wyoming teachers was utilized to explore the relationship of certification level (National Board Certification or non-National Board Certification) and teacher education level (bachelor's degree or advanced degree) with four correlates of teacher quality: instructional practice, classroom management, teacher efficacy, and teacher leadership. The purpose of these studies was to provide an extensive exploration of teacher quality and to more clearly understand the collective relationship of certification and teacher education level on the four correlates of teacher quality.*

In the thematic study, a significant difference was found within the certification variable (NBC and non-NBC) for frequency. National Board Certified Teachers (NBCTs) reported more frequent engagement in the indicators of teacher quality than teachers without certification. In the individual studies there were significant differences on the certification variable (NBC and non-NBC) for frequency of engagement in classroom management and teacher leadership indicators with NBCTs reporting more frequent use of classroom management and teacher leadership indicators than non-NBC teachers. Additionally, the importance of teacher leadership resulted in a significant difference with NBCTs reporting greater importance of teacher leadership indicators than non-NBCTs.

The results of this study add to the research on understanding teachers' perceptions of the importance of and frequency of engagement in high quality teaching indicators. The study provides evaluative information for the Wyoming National Board Certification Initiative and informs the initiative's efforts to strengthen the quality of teaching in Wyoming schools. Recommendations from the study may also be helpful in informing future educational policy decisions concerning the relationship between teacher quality and student learning.

Keywords: *Teacher Quality, Professional Development, National Board Certification, Collaborative Writing, Instructional Practice, Classroom Management, Teacher Efficacy, Teacher Leadership*

WYOMING TEACHERS' PERCEPTIONS OF TEACHER QUALITY



As the knowledge base in our world continues to grow, as students come to school with more diverse needs, and as the federal government continues to push for higher and higher achievement rates, teachers must be provided with time and incentives to continue to learn about and improve their instruction. Haycock (1998) stated, "What all the studies conclude is the single most important factor in student achievement (is) the teacher" (p. 2). Darling-Hammond and Youngs (2002) agreed the knowledge and skills of a child's teacher are the most important determinants of student success. Nye, Konstantopoulos, and Hedges (2004) found that as much as 21% of the variance in student achievement gains can be explained by variation in teacher quality. Hanushek (1992) estimated that a high quality teacher, in comparison to a low quality teacher, can provide one full year's difference in the learning of a class of children. Geringer (2003) not only affirmed that a good teacher is a crucial factor in student learning, but also stated that teacher quality outweighs the importance of standards, funding, and class size. Since the 1990s, a steady flow of additional research has documented the close relationship between teacher quality and student achievement (Ferguson, 1991; Hanushek & Rivkin, 2006; Sanders & Rivers, 1996) with effective instruction identified as a profoundly important variable for improving student achievement and educational equity (Marzano, Pickering, & Pollock, 2001; Reeves, 2006).

The Teaching Commission (2004) asserted quality teaching is paramount for student achievement and the future security of our nation. In the report *Teaching at Risk*, the Teaching Commission determined teacher quality was a critical factor in attempts to improve our nation's global competitiveness, security, and future. Additionally, recent federal legislation has placed increased pressure on districts and states to provide highly qualified teachers in every classroom (Cavalluzzo, 2004; No Child Left Behind, 2008). As a result, the educational community has become focused on the importance of teacher quality, and the types of continuing professional development available to teachers that improves the quality of their instruction. Historically, teachers have attended the following types of continuing education: graduate classes; national, state, and district workshops; and school-based in-services. These traditional opportunities have resulted in little improvement in the overall quality of teaching, or in increasing student achievement (National Commission on Teaching and America's Future, 1996; US Department of Education, 1999). However, within the last two decades, the educational community has made significant strides in improving teacher quality, and the quality of professional development experiences, by establishing standards for accomplished teaching (National Board for Professional Teaching Standards, 2007).

The National Board for Professional Teaching Standards (hereafter referred to as the National Board) is an organization that has been working to improve the quality of teaching in America's schools since its inception in 1987. The National Board has been involved in developing and disseminating standards that define accomplished teaching and formally recognizing teachers who meet these standards by awarding them advanced-level certification. By articulating the components of high-quality practice, making these descriptions widely available, and acknowledging teachers who demonstrate these practices, the National Board asserted that teaching and student learning will improve (Hakel, Koenig, & Elliot, 2008). Furthermore, defining quality teaching standards may help standardize teacher preparation programs, graduate programs, and other professional development opportunities for teachers who would like to improve the quality of their teaching but do not want to participate in the National Board Certification (NBC) process. It was the intent of this research study to determine

the effects certification (NBC or non-NBC) and education level (bachelor's degree or advanced degree) have on teacher quality indicators in the state of Wyoming.

THEORETICAL FRAMEWORK

In 1986, the Carnegie Forum on Education and the Economy published a report, *A Nation Prepared: Teachers for the 21st Century*. This report highlighted a need for drastic changes in America's education system in order to prepare our nation's children for productive lives in the 21st century. The report suggested that today's schools must provide to *all* students the same quality of education presently reserved for few, or the cost would be the steady erosion of the American standard of living. The Carnegie report concluded the development of highly qualified teachers must be the first focus in developing a highly qualified workforce able to meet the needs of students (Carnegie Forum on Education and the Economy, 1986).

One decade later, a report issued by the National Commission on Teaching and America's Future (NCTAF, 1996), *What Matters Most: Teaching for America's Future*, reiterated the challenges facing schools. To meet the needs of the 21st century, this report suggested America's schools must successfully teach more students with increasingly diverse backgrounds more effectively than ever before. The commission determined it is not just that educational demands are increasing, but the very nature of learning is changing. Students must do more than learn new facts or cover more material; they must learn to integrate and apply their knowledge in more complex ways to more difficult problems. For this to happen, teachers need to work in new ways. It also means schools must reorganize themselves to enable more intensive kinds of learning, supported by new technologies (NCTAF, 1996).

Today, educational theorists and researchers continue to emphasize what students need to know and be able to do to be successful in our ever-changing world. Castleman and Littky (2007) argued to be successful in the 21st century students need to know how to establish work ethic, communicate verbally and in writing, work directly with and influence people, synthesize information, and creatively solve problems. A report from the commission on the whole child, *The Learning Compact Redefined: A Call to Action* (Association for Supervision and Curriculum Development, 2007) suggested the current, well-intentioned focus on academics is essential for student success. Each citizen must be prepared to live in and contribute to a worldwide community of shrinking size and growing complexity. However, a focus solely on academics and on narrowly measured academic achievement will fail to educate the whole child for success in the 21st century. If schools are not created to encourage and celebrate every aspect of each student's capacity for learning, our young people will be shortchanged and their futures will be limited (ACSD, 2007). With so much at stake, the educational community must find a way to prepare our teaching force to better meet the challenges of the 21st century. This transition to a more learner-centered focus requires a shift in teacher education and professional development.

Traditionally, graduate coursework and isolated professional development workshops have been utilized for increasing the knowledge and skills of teachers and providing teachers with opportunities for moving forward on the salary schedule. According to Rice (2001), there is limited evidence on the impact of obtaining a master's degree on teacher quality. Rice (2003) concluded, "more refined measures of what teachers know and can do (e.g., subject-specific credentials, special coursework taken) are better predictors of teacher and student performance than are more conventional measures (e.g., highest degree earned, undifferentiated course credits earned)" (p.50). Rice's conclusion provides support for the NCTAF report (1996), which

stated professional growth opportunities have historically been limited and ineffective in most schools.

Since traditional professional development experiences had not shown the desired effect on teacher quality, the National Board was launched in 1987 to help grow a more qualified workforce. The purpose of the National Board is to improve the quality of education by creating standards for accomplished teaching and certifying teachers who meet or exceed those standards (Hopkins, 2004).

The NCTAF (1996) found to prepare teachers for their roles in 21st century education professional development must focus on what teachers know and are able to do. This report encouraged such professional development opportunities as the NBC process because it provides the opportunity for teacher-initiated, teacher-directed learning. Teachers who participate in the NBC process are actively involved in their own learning by comparing their current instructional practice against the Professional Teaching Standards identified by the National Board for their grade level and content area, reflecting on instructional practices that meet these standards, and making appropriate instructional modifications to meet the diverse needs of students (NBPTS, 2000). The No Child Left Behind (NCLB) Act of 2001 also designated support of the NBC program as one of six strategies for targeting teacher quality and producing highly qualified teachers (Goldhaber, Perry, & Anthony, 2004).

The process of NBC was not designed as a stand-alone educational improvement strategy or general fix-all measure. NBC was intended to function as one component of the ongoing work of national education reform (Koppich, Humphrey, & Hough, 2006). From its inception, the National Board was designed not to create a niche or elitist group of teachers, but rather to strengthen the entire teaching profession in order to improve schools and student learning (NBPTS, 2007). The NBC process is viewed as a leading methodology for recognizing accomplished teaching practices and financial incentives offered by states and districts are a testament to its perceived value (Harman, 2001).

In the state of Wyoming, an initiative has been developed to provide foundation and legislative support for state-wide actions designed to strengthen the quality of classroom teaching in Wyoming's public schools. A goal of this initiative is to increase the number of National Board Certified Teachers (NBCTs) to a level of national leadership for the percentage of teachers obtaining certification. According to the Wyoming National Board Certification Initiative (WNBCI) website (WNBCI, 2008), the initiative was piloted in 1998 and expanded state-wide in 2004 through the John P. Ellbogen Foundation. The goals of the initiative include:

- Recruiting teacher applicants for NBC;
- Establishing a strong support system for teachers undergoing the process;
- Ensuring every school in Wyoming eventually has one or more NBCTs; and
- Providing awards and public recognition to those receiving the certification.

In an effort to improve the quality of Wyoming teachers, the State of Wyoming and the Ellbogen Foundation have promoted NBC by providing monetary resources and professional development opportunities to support teacher candidates. Fall of 2008 brought the number of teachers in Wyoming who have received certification from the National Board to 202 out of the approximately 7,000 teachers in the state (WNBCI, 2008). As the WNBCI grows, it is important to determine if the funding and support provided through the Ellbogen foundation and the state legislature are achieving the desired outcome of improving teacher quality and student achievement.

Although many studies and reports have demonstrated the importance of teacher quality on improving student learning (Corcorran, Evans & Schwab, 2004; DuFour, DuFour, Eaker, &

Many, 2006; Haycock & Huang, 2001; Odden & Wallace, 2003), empirical evidence of the effectiveness of NBC (Cavalluzzo, 2004) and earning an advanced degree (Rice & Cohen, 2006) is limited. In addition, none of this research has focused on Wyoming teachers. This illustrates the need to consider the effects of certification and teacher education level on the quality of Wyoming teachers.

THEMATIC AND INDIVIDUAL RESEARCH STUDIES

For this research, four doctoral students conducted a thematic study to examine the effects of certification (NBC or non-NBC) and education level (bachelor's degree or advanced degree) on the perceptions Wyoming teachers hold about the quality of their teaching. The University of Newcastle Australia (2006), defined a thematic research study as a broad grouping of areas of research with a common theme. This thematic study involved multiple researchers conducting a study in which an overall theme was explored by combining individual but related research areas. To determine the individual areas of research that were pursued as part of the thematic study, a review of current literature was conducted about teacher quality. This review led to the selection of four correlate areas of teacher quality that form the basis of the thematic study: instructional practice, classroom management, teacher efficacy, and teacher leadership. These correlate areas were reported in the literature time and again as being critical to improving teacher quality. Twelve indicators of quality teaching for each correlate area were also derived from the research literature (Appendix A). Five comprehensive and interrelated studies encompass the research; the thematic study and four individual studies. The purpose of the studies was to more clearly understand both the collective relationship of NBC and teacher education level on the four correlates of teacher quality and to examine each of the four correlates independently.

WHY A COLLABORATIVE WRITING PROCESS?

Research on collaborative processes has shown, "under the right circumstances, groups are remarkably intelligent, and are often smarter than the smartest people in them" (Surowiecki, 2005, p. xiii). Collaborative writing is a deliberative practice with feedback from team members and editors. Strauss (2001) argued that collaborative writing reflects the reality of the real world where group work is increasingly valued in the workplace and where collaborative writing is a common practice. Writing collaboratively allows learners to pool their linguistic resources and produce significantly more accurate texts than those who write alone (Wigglesworth & Storch, 2009). In addition, collective scaffolding allows learners to work at a higher level of activity than when working alone (Donato, 1994; Ohta, 2000; Storch, 2002; Swain, 2000). Strauss and U (2007) determined collaborative writing not only produces better texts overall, but also allows writers to learn more through the process.

According to Phillips, Sweet, and Blythe (2009) other potential benefits of collaborative writing include increased productivity, mentoring opportunities, professional development, and collegial networking. Collaborative writing can increase ideation levels, and also broaden, sharpen, and deepen disciplinary knowledge. Pilotti and Chodorow (2009) added collaborating on writing provides writers with opportunities to share their expertise with others, and provides the possibility of easy access to feedback on issues of content and form during reviewing.

Through a collaborative writing process, the researchers in this study worked together to achieve the collective purpose of studying the complex and multi-dimensional nature of teacher quality. A systematic process was utilized in which the researchers worked together to research,

study, analyze, and write about teacher quality. This team approach allowed the researchers to engage in ongoing research and conversations that promoted deep levels of thinking and learning; leading to more thorough and comprehensive research than what would be accomplished in any of the individual studies.

RESEARCH DESIGN AND METHODS

An ex-post facto research design was employed to gather information about teacher perceptions regarding the self-reported importance of and frequency of engagement in the four correlates of teacher quality: instructional practices, classroom management, teacher efficacy, and teacher leadership. This research resulted in five comprehensive and interrelated studies; the thematic study and four individual studies. The thematic study combined the four individual studies for an extensive exploration of teacher quality.

The thematic study was designed to answer the following research questions about Wyoming teachers: 1) Is there a relationship between the four correlates of teaching quality (instructional practice, classroom management, teacher efficacy, and teacher leadership) and the variables of certification (NBC or non-NBC) and teacher education level (bachelor's degree or advanced degree)? 2) What are the differences among the four correlate areas in both perceived importance and self-reported frequency of engagement in the indicators of teacher quality, and what differences occur when comparing importance to frequency?

The individual research studies focused specifically on one of the four correlates of teacher quality. Each correlate was examined by asking Wyoming teachers to determine the importance of the indicators in each correlate area and report on how frequently they engage in them. The difference between what teachers report as important and their level of participation in these practices was investigated. The purpose of the individual research studies was to better understand the following overarching question from the perspective of teachers: What is the effect of certification and teacher education level on each individual correlate for Wyoming teachers? Additionally, the difference between Wyoming teachers' beliefs about the importance and their self-reported frequency of engagement in the indicators related to each correlate area was explored.

DATA SOURCES

The thematic and individual studies utilized a survey, designed from the research literature, to determine the perceptions Wyoming teachers hold about the quality of their teaching in each of the identified correlate areas: instructional practices, classroom management, teacher efficacy, and teacher leadership. The combined survey provided information regarding the overall effect of NBC and teacher education level on teacher quality indicators. Sub-sections of the survey focused on indicators in each of the correlate areas informed the individual study results.

To get a sense of reliability of the scale in terms of consistency of responding, reliability coefficients were calculated for all sub-scales (see Table 1). Reliability coefficients ranging from 0.79 to 0.95 indicated that the survey was internally consistent.

The survey was sent by email to the entire population of Wyoming NBCTs (N=202). Additionally, the survey was sent by email to Wyoming principals in six school districts selected through a stratified, random selection process. The principals were asked to forward the survey to teachers in their schools. The sample consisted of the teachers in

these two populations who elected to respond to the on-line survey. Descriptive statistics were used to describe the general characteristics of the respondents.

Table 1. *Cronbach's Coefficient Alpha for Thematic Scale and Individual Correlate Sub-scales*

Scale	Importance Coefficient	Frequency Coefficient
Thematic Scale	0.95	0.94
Instructional Practices Sub-scale	0.87	0.80
Classroom Management Sub-scale	0.83	0.79
Teacher Efficacy Sub-scale	0.87	0.81
Teacher Leadership Sub-scale	0.95	0.94

A total of 181 email messages were successfully sent to Wyoming NBCTs. The email addresses of the other 21 NBCTs were reported as undeliverable. Seventeen principals in six Wyoming school districts were sent email messages and asked to forward the messages to their teachers, and respond to the email with the number of teachers who were forwarded the email. Very few principals reported this total, so using information provided on the Wyoming Department of Education website (www.k12.wy.us), it was estimated these principals forwarded the email message with the survey link to a total of 502 teachers. A total of 150 teachers responded to the survey. Twenty returned surveys were not included in this study as all of the sections were not completed and/or information about certification and level of education were not indicated. Survey respondents included 55 Wyoming NBCTs, for a 30% response rate. There were also 75 non-NBCT respondents for approximately a 15% response rate. The combined approximate response rate was 19%.

RESULTS AND CONCLUSIONS

Results of the thematic study and the four individual studies examining Wyoming teacher perceptions of teacher quality offer some insights about the effects of certification and education level. First, the results and conclusions of the thematic study will be discussed.

RESULTS AND CONCLUSIONS OF THE THEMATIC STUDY

In the thematic study, a significant difference ($p = .02$) was found within the certification variable (NBC and non-NBC) for frequency (Table 2). NBCTs ($M = 3.44$, $SD = .29$) reported more frequent engagement in the indicators of teacher quality than teachers without certification ($M = 3.27$, $SD = .36$).

Table 2. *ANOVA Summary Table for Influence of Certification and Teaching Level on Frequency of Engagement in Teacher Quality Indicators*

Source	df	SS	MS	F	P
Certification	1	010.59	10.59	6.00	.02
Education Level	1	000.62	00.62	0.35	.56
Certification x Education Level	1	001.12	01.12	0.63	.43
Error	126	222.58	01.78		
Total	130	234.91			

Significance was also found when comparing the means of the individual correlate areas for both importance and frequency of engagement in teacher quality indicators (Table 3). The mean for importance of teacher efficacy indicators (M = 3.53, SD = .03) was significantly greater than the other correlate areas of instructional practice (M = 3.43, SD = .04), classroom management (M = 3.40, SD = .03), and teacher leadership (M = 2.87, SD = .05). Frequency of engagement in the correlate areas of instructional practices (M = 3.56, SD = .33), classroom management (M = 3.52, SD = .33), and teacher efficacy indicators (M = 3.57, SD = .33) were significantly greater as compared to teacher leadership (M = 2.72, SD = .58). In addition, frequency of engagement in teacher efficacy indicators (M = 3.57, SD = .33) was significantly greater than frequency of engagement of classroom management indicators (M = 3.52, SD = .33).

Table 3. *Pairwise Comparisons for Sub-Scales on the Measure of Importance and Frequency of Engagement in Teacher Quality Indicators*

Sub-scale		p for Importance	p for Frequency
Instructional Practice	Classroom Management	.19	.07
	Teacher Efficacy	< .001	.50
	Teacher Leadership	< .001	< .001
Classroom Management	Instructional Practice	.19	.07
	Teacher Efficacy	< .001	.02
	Teacher Leadership	< .001	< .001
Teacher Efficacy	Instructional Practice	< .001	.50
	Classroom Management	< .001	.02
	Teacher Leadership	< .001	< .001
Teacher Leadership	Instructional Practice	< .001	< .001
	Classroom Management	< .001	< .001
	Teacher Efficacy	< .001	< .001

In addition to examining mean differences, data from the opened-ended questions were reviewed by utilizing a content analysis. The first open-ended question (What experiences have prompted changes to your teaching?) was answered by 126 of the 130 (97%) respondents. The second open-ended question (What type of support would best help you to continue to improve your teaching practices?) received answers from 112 of the 130 (86%) respondents.

Of the 55 NBCTs who responded, 19 teachers or 35% reported NBC as an experience that prompted changes to their teaching. In addition to citing NBC as a valuable experience for improving teaching, these same teachers also stated the following experiences changed their teaching: student learning and student needs, advanced education and other types of professional development, new positions, NCLB legislation, team-teaching, and peer coaching. Two of the 75 non-NBCTs listed the National Board process as having an effect on their teaching practice in response to the first open-ended question. Other responses about what prompted changes in teaching practices from non-NBCTs were similar to those provided by NBCTs and included such experiences as: student performance, NCLB legislation, professional development, and advanced education. In response to the second open-ended question, 55% of NBCTs and non-Board certified teachers reported that one or more of the following would provide support for continued improvement of teaching practices: professional development, collaboration, and autonomy regarding curriculum choices.

RESULTS AND CONCLUSIONS OF THE INDIVIDUAL STUDIES

In the individual studies a significant difference was found for certification level on frequency of engagement in classroom management indicators (Table 4), with NBCTs (M=3.61, SD = .26) self-reporting greater frequency of engagement in classroom management indicators than non-NBCTs (M=3.45, SD = .37).

Table 4. ANOVA Summary Table for Influence of Certification and Education Level on Frequency of Engagement in Classroom Management Indicators

Source	df	SS	MS	F	P
Certification	1	00.65	.65	6.12	.02
Education Level	1	00.03	.03	0.30	.59
Certification x Education Level	1	00.19	.19	1.78	.19
Error	126	13.28	.11		
Total	130	14.15			

A significant difference was also found for certification level on the importance of teacher leadership (Table 5) with Wyoming NBCTs (M=2.97, SD = .45) reporting greater importance of teacher leadership indicators than non-NBCTs (M=2.80, SD = .56). In addition, a significant difference was found for certification level on Wyoming teachers self-reported frequency of engagement in teacher leadership (Table 6) with NBCTs (M=2.88, SD = .54) reporting greater frequency of teacher leadership indicators than non-NBCTs (M=2.60, SD = .56).

Table 5. ANOVA Summary Table for Influence of Certification and Education Level on Importance of Teacher Leadership Indicators

Source	df	SS	MS	F	p
Certification	1	01.07	1.07	3.98	< .05
Education Level	1	00.22	.22	.82	.37
Certification x Education Level	1	00.08	.08	.31	.58
Error	126	33.87	.27		
Total	130	35.24			

Table 6. ANOVA Summary Table for Influence of Certification and Education Level on Frequency of Engagement in Teacher Leadership Indicators

Source	df	SS	MS	F	p
Certification	1	01.71	1.71	5.35	.02
Education Level	1	00.05	0.05	0.17	.68
Certification x Education Level	1	00.11	.11	0.34	.56
Error	126	40.46	.32		
Total	130	42.23			

LIMITATIONS OF THE STUDIES

Although a stratified, random sample of Wyoming teachers was used for this study, this population may not generalize to NBCTs and non-NBCTs outside of the state of Wyoming. This study also resulted in a relatively low overall response rate (19%). In particular, there was a low percentage of elementary teacher responses which could have an effect on the overall generalizability. In addition, the credibility of the survey was limited by the self-report format and its potential for inaccuracy and bias. The study does not provide additional research

methods to verify the accuracy of these reports. Finally, for some respondents, the dual-matrix format that asked for simultaneously rating importance as well as frequency may have resulted in respondents matching their importance and frequency responses rather than truly reflecting on each scale independently.

SIGNIFICANCE OF THE STUDIES

The results of these studies add to the research on teachers' perceptions about the importance of and frequency of engagement in high quality teaching indicators. Examining the effects of certification on the perceptions of Wyoming teachers provided evaluation information for the WNBCI and helped determine the effects of the efforts to strengthen the quality of teaching in Wyoming schools. Recommendations from the studies may also be helpful in informing future educational policy decisions concerning the role of teacher quality and ultimately the learning of all students.

A significant effect of NBC on the overall frequency of engagement was found in the indicators of the four identified teacher quality correlates. In addition, the findings of these studies reveal interconnected relationships among the four identified correlates of teacher quality: teacher efficacy, classroom management, instructional practices, and teacher leadership (Figure 1). The four correlates of teacher quality identified in this study form a continuous cycle of improvement which may lead to the overall advancement of teacher quality. This represents an important change from the original conception of the thematic study in which the four correlate areas were viewed as isolated areas of teacher quality, unconnected to one another. The NBC process is one professional development program that supports the connections among these correlate areas.

The findings of this study suggest the Wyoming teachers responding to the survey have a high level of teacher efficacy. The teacher efficacy sub-scale for importance was significantly higher than any other correlate sub-scale. Strong teacher efficacy may have influenced these teachers' perceptions on classroom management and instructional practice. Research suggests high levels of efficacy leads to more effective classroom management and instructional practice. High quality teachers with strong efficacy who have developed effective classroom management and instructional practices may participate in more teacher leadership experiences. Teacher leadership activities, such as modeling instructional practices and discussing student learning, provide a critical connection back to teacher efficacy.

Professional development programs, based on the Professional Teaching Standards, that build teacher efficacy practices, will influence the implementation of quality classroom management and instructional practices that lead to increased student achievement. Teachers demonstrating quality teaching practices in these three areas are then ready to take on teacher leadership roles to further influence teacher efficacy which may ultimately improve overall teacher quality. This creates a continuous model of systemic reform when these accomplished teachers conduct professional development that involve directly challenging and changing teacher efficacy, classroom management and instructional practice.

CONCLUSION

Pressure on districts and states to provide highly qualified teachers continue to come from state and federal legislation (Cavalluzzo, 2004; NCLB, 2008). As a result, the educational community will need to remain focused on the importance of teacher quality, and the types of continuing professional development available to teachers that improves the quality of their instruction. Ongoing work to define, utilize, and increase the frequency of use of quality teaching standards may help standardize teacher preparation programs, graduate programs, and other professional development opportunities. This research provides support for the National Board and the Professional Teaching Standards in improving teacher quality through professional development.

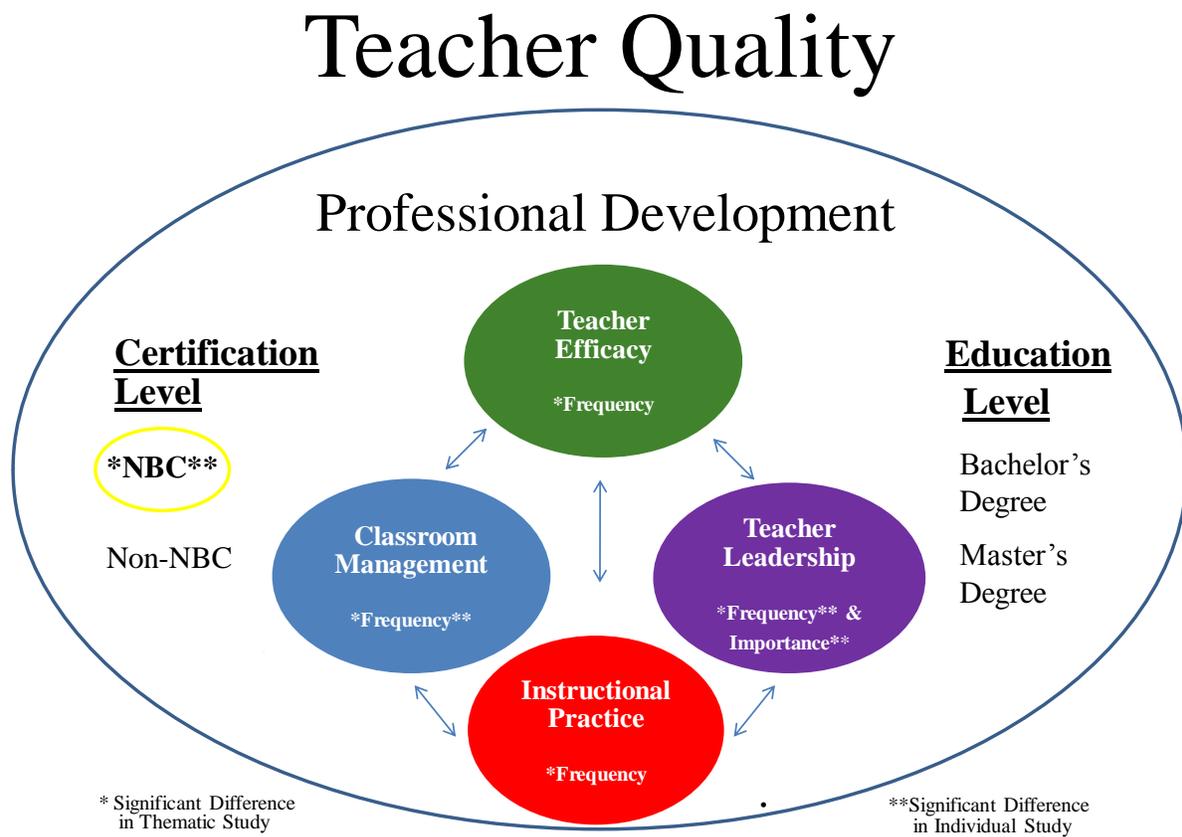


Figure 1. Relationships among the four correlate areas of teacher quality and NBC.

The thematic study incorporated four individual studies for a comprehensive exploration of teacher quality. The collaborative work that occurred as part of the thematic study increased the depth and breadth of the research. This team approach provided a blend of pressure and support, and increased the amount of feedback which resulted in five comprehensive and interrelated studies. As colleagues and professionals, a shared goal of determining the effect of two types of professional development on teacher quality in four correlate areas was pursued. Through this pursuit, a collaborative community of learning was

established similar to the professional communities that McLaughlin and Talbert (2001) characterized which includes shared responsibility and collaboration to improve practice and advance learning (Park, Oliver, Johnson, Graham, & Oppong, 2007).

Teacher quality is complex and multidimensional. Mitchell, Robinson, Plake, and Knowles (2001) add that teacher quality standards are extremely complicated including a wide range of knowledge, skills, abilities, and dispositions that competent teachers must possess and demonstrate both inside and outside of the classroom. Additionally, Owings et al. (2006) concluded although researchers agree that teacher quality is an important factor influencing student outcomes, there is little consensus regarding the relationship among specific teacher credentials (such as experience, degree level, certification status), characteristics (such as age, race, ethnicity), and teacher effectiveness. However, Coskie and Place (2008) suggest there is vast agreement that teacher quality unmistakably matters and understanding the lasting impact of the NBC process on teaching and learning is important given the personal, professional, and financial investment represented in the process. Finally, Corcoran (2007) recommends that the search for comprehensive measures of teacher quality encompassing all outcomes expected of schools must remain at the forefront of research and policy discussions. This remains true and these are all important factors for future consideration in additional studies on teacher quality and the effect of teacher quality on student achievement.

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APPENDIX A: ONLINE TEACHER QUALITY SURVEY

Teacher quality is critical to student achievement. The purpose of this survey is to examine the behaviors and activities Wyoming teachers believe are important as well as the frequency in which they engage in them. [Participants will use the two questions and scales below to respond to each of the following 48 items.]

How important is it that each of the items below be addressed in your role as a teacher?

- Not important
- Somewhat important
- Important
- Extremely important

How often do you engage in each of the items listed below during a school year?

- Never/Very Rarely
- Seldom
- Sometimes
- Often

1. Accessing professional development opportunities
2. Reading current literature to improve instructional practice
3. Assessing the progress of all students on a continual basis
4. Employing multiple methods for measuring student growth
5. Analyzing student work to inform instructional decision making
6. Providing specific feedback to students to increase their learning
7. Providing adaptations or modifications for students with varied backgrounds or abilities
8. Using a variety of instructional techniques to keep students actively engaged in learning
9. Differentiating instruction using knowledge of individual students
10. Incorporating cultural diversity into instructional planning
11. Reflecting on how well ideas worked in practice to refine or modify future lessons
12. Communicating student performance to parents
13. Teaching behavioral expectations in my classroom
14. Changing the classroom environment to meet student needs
15. Individually adapting instruction to promote high rates of on-task behavior
16. Establishing procedures or routines to maintain a positive climate
17. Using positive reinforcements to support behavioral expectation
18. Drawing on relationships with colleagues for guidance and support
19. Adapting instructional strategies to increase student success
20. Using modeling in the presentation of new materials
21. Adjusting pacing to meet the range of student abilities
22. Selecting materials that are at an appropriate level for individual student needs
23. Building collaborative relationships with families
24. Providing established consequences as a result of student behaviors
25. Connecting with the most difficult students
26. Helping students to think critically
27. Encouraging students to believe they can do well in school
28. Obtaining the content knowledge necessary to answer difficult questions from students
29. Motivating students to complete homework
30. Gauging student understanding of what has been taught

31. Crafting good questions for students
32. Identifying strategies or techniques to help struggling students
33. Finding alternative strategies to keep students on task when work is difficult
34. Providing an additional explanation or example when students are confused
35. Creating appropriate challenges for very capable students
36. Motivating students who show low interest in school
37. Engaging in conversations with colleagues that focus on student learning
38. Reflecting on school goals or initiatives
39. Monitoring school-wide student performance data
40. Advocating in your school, district, community or state for high quality education
41. Playing a leadership role in professional development activities
42. Mentoring teachers in your school or district
43. Serving as a mentor for pre-service teachers
44. Modeling lessons or teaching strategies for colleagues
45. Leading school or district committees
46. Participating in professional organizations
47. Working with a team to develop or adjust curriculum
48. Working with a team to develop assessments

Demographics

What level(s) do you teach? (please check all that apply)

K-6 7-12 Other

What is the highest level of education you have completed?

BA or BS MA or MS EdD or PhD Other

Are you a Nationally Board Certified Teacher?

Yes No

What is your gender?

Male Female

How many years have you been working in education? _____

What experiences have prompted changes to your teaching practices?

What type of support would best help you to continue to improve your teaching practices?