

Teacher Quality Variables and Efficacy for Teaching Minority Students

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In this analysis of the extant literature, we examined teacher quality variables that have shown a relationship with teacher efficacy for instructing urban minority students. We focused on the following areas: (a) importance of teachers, (b) teacher quality defined, (c) components of teacher quality, (d) self-efficacy, and (e) teacher efficacy.

Introduction

A review of the current literature revealed that much research has been devoted to the study of teacher quality variables (Darling-Hammond, 2009a, 2009b, 2012; Lieberman & Darling-Hammond, 2011; Marzano, 2009), self-efficacy (Bandura, 1977, 1982, 1986, 1997), and teacher efficacy (Hughes, 2012; Klassen, Tze, Betts, & Gordon, 2011; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998), but little research has been done with respect to these variables in teaching minority students, specifically. Accordingly, we focused on the relationship of these variables in improving student achievement for minority students. Because teachers are responsible for the successful learning of *all* students and because an achievement gap continues to exist between white students and children of color, we contend it is important to examine the link between teacher quality variables and teacher efficacy for teaching urban minority students.

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Importance of Teachers

Coleman shocked educators with his finding that school level characteristics mattered little in explaining student achievement (Coleman et al, 1966). He argued that schools had only a negligible effect on student performance and that most of the variation in student learning was a product of differences in family background. Edmonds (1979) was the first to dispute Coleman's findings. In his 1979 article, Edmonds set forth six effective school correlates—clear and focused mission, principal leadership, high expectations for student achievement, opportunity to learn and time on task, frequent monitoring of student progress, and safe and orderly climate—which seemed to refute Coleman.

Subsequent findings related to student performance found teacher quality to be a strong predictor of student achievement (Darling-Hammond, 2000, 2008, 2012; Lieberman & Darling-Hammond, 2011; Marzano, Pickering, & Pollock, 2010). In particular, Rivkin, Hanushek, and Kain (2005) revealed that teacher quality plays a vital role in the progression of positive student results. Rivkin et al. (2005) projected that the after-effects of a one standard deviation increase in teacher quality produces an increase in student success of at least 0.11 standard deviations in the total mathematics test score and 0.095 standard deviations in reading test score allocations. Furthermore, Hanushek and Rivkin (2004) predicted that an underprivileged student (i.e. one who is eligible for free or reduced lunch), who is allowed to have five sequential teachers one standard deviation above the norm in teacher quality, can virtually overcome the average success variance coming from a disadvantaged populace.

Defining Teacher Quality

Since the No Child Left Behind Act of 2001 (Public Law 107-110) became law and approximately two decades prior, one of the most important topics in the field of education is teacher quality and its impact on student achievement. This has been exemplified through numerous researchers and theorists who concur that both quality teachers (Darling-Hammond, 2009a, 2009b, 2012; Marzano, et al., 2010) and teaching methods (Borich, 2011; Hanson, 2011; Lunenburg & Irby, 2011) are significant classroom learning predictors. For example, quality teachers have proven to be more effective in reaching and inspiring students when compared to ineffective teachers (Newton, Darling-Hammond, Haertel, & Thomas, 2010; Slater, Davies, & Burgess, 2012; Stronge, Ward, & Grant, 2011).

Recently attention has been focused on the achievement gap and the equally substantial inequalities in access to educational opportunity for low-income minority students (Darling-Hammond, 2010a, 2010b; Howard, 2011; Paige, 2011). The gaps in educational achievement between White and low-income, non-Asian “minority” students remain large, and the differences in access to educational opportunities are growing (Lunenburg & Ornstein, 2012). Empirical research conducted on teaching minority students revealed that effective teachers can inspire an additional year's worth of achievement from their students (Mangiante, 2011; Popp, Grant, & Stronge, 2011; Tan & Barton, 2010).

Despite the significance of quality teaching, there is little consensus among educational scholars on the precise definition of a “quality teacher.” For example, Winters (2012) defined teacher quality as being good teachers who receive the largest gains in student achievement, whereas bad teachers are just the opposite. Kelly (2011) argued that in addition to test performance, a close examination of instructional processes, including strong verbal

and mathematical skills, a deep content knowledge, and strong teaching skills, as well as a positive school context are needed in order to truly understand teacher effects and improve learning in our nation's schools. Furthermore, Hargreaves and Fullan (2012) suggest that teachers who possess these skills are able to positively affect change and improvement in every school.

Mangiante (2011) outlined measures of teacher effectiveness in low-income minority schools in accordance with the following characteristics: They engage students in higher order thinking; address central ideas thoroughly in order to help students acquire deep knowledge; foster substantive conversation among students; and connect student learning to the world beyond the classroom.

Earlier, Darling-Hammond (2000) conducted a meta-analysis of numerous state policies on quality teaching that resulted in the following conclusions:

1. Quality teaching is loosely related to a teacher's content knowledge.
2. Teachers who prepare formal coursework are more likely to engage in quality teaching.
3. A teacher's passion for learning has a positive effect on quality teaching.
4. Traditional content teacher certification has been shown to enhance student achievement; conversely, a teacher with alternative certification has not been proven to exert a constructive influence on student performance.
5. A positive relationship exists between new teacher induction programs and teacher quality; however, additional research is required in identifying the variables that could quantify this relationship.
6. Although personality traits and interaction styles may have a positive effect on teacher quality, these variables have yet to be included in quality teaching empirical research.
7. A teacher's state licensing scores have been identified as having a strong relationship to student achievement.
8. With regard to policy and the assessment of teacher quality, the variety and number of variables are predictors of student achievement.

Darling-Hammond's list of conclusions tends to support subsequent definitions of teacher quality provided by Winters, Kelly, Hargreaves and Fullan, and Mangiante. Darling-Hammond examined the definition of teacher quality from a state policies perspective.

Components of Teacher Quality

Strong (2012) recognized five characteristics that reveal teacher quality: (a) experience, (b) program preparation and degrees, (c) type of certification, (d) coursework taken in preparation, and (e) teachers' test scores. Seven components of teacher quality are examined in this section: (a) knowledge of subject matter, (b) teacher degree and coursework, (c) teacher certification, (d) experience, (e) verbal ability, (f) content knowledge, and (g) pedagogical knowledge and training.

Knowledge of Subject Matter

Knowledge of one's subject matter is considered to be one of the most debatable issues. While it would appear that knowledge of subject matter would be an irrefutable predictor of quality teaching, research has shown that the connection between student achievement and subject matter knowledge is inconsistent (Kansanen, 2009). For example, the following variables come into play as teacher quality inconsistencies evolve: (a) the ambiguity of describing the necessary level of knowledge a teacher must possess; (b) the assessment of subject knowledge to college level coursework; and (c) the lack of research in other subject areas, excluding mathematics (Arzi & White, 2008; Kansanen, 2009).

The investigation of specific knowledge and the capability of teachers to choose, coordinate, and present their subject matter has attracted the interest of numerous researchers in the field of education. For example, a variety of functional definitions are used to define subject matter knowledge, and the amount of specialized college coursework consistent to the field of study a teacher is trained to teach is used to assess the level of his or her knowledge. Cohen et al. (2010) argued that one of the most common fundamentals used to relate to quality teaching is the type of college degree held. There is some evidence that teachers who obtain their degrees with a major or minor in either mathematics (Amadalo, Wasike, & Wambua, 2011; Zhang, McInerney, & Frechtling, 2011) or science (Zhang, McInerney, & Frechtling, 2011) have higher student achievement outcomes than those who lack a background in these respective subject areas. Ingvarson and Rowe (2008) further noted that available research data pertaining to one's knowledge of a particular subject matter is too narrow and concentrated on mathematics. Yet, available research is comprehensive and confirms how vital knowledge of subject matter is to teachers (Darling-Hammond, 2009a).

Although a review of the research suggested that a number of courses are indeed useful, the requirement of a particular major field of study is questionable. In other words, no research can reach comparable conclusions that overtly measure a potential teacher's area of expertise as it relates to the assessed correlation between subject matter preparation and student learning. Based on an examination of surveys designed to establish a relationship between subject matter and teacher performance, however, it is essential that teachers fully understand the important ideas in the subjects they teach. As defined by student test scores, the connection between subject matter knowledge and teacher quality in the arts and sciences and in the foundations of education is unclear (Floden and Meniketti, 2005).

Teacher Degree and Coursework

In a study conducted by Rice (2003), the selection or status of the educational institution a teacher attended was found to have a positive influence on student performance, particularly at the secondary level, which may indicate a teacher's cognitive aptitude. Equally, coursework in the teacher's subject area taught played a role in positive educational effects. For example, the combination of content knowledge and academic coursework appeared to enhance teacher effectiveness. In addition, positive effects with respect to new teachers who learned the teaching profession through field experiences lessened classroom uneasiness.

Darling-Hammond (2000) examined six studies associated with teacher coursework and degrees obtained. She found a constant and positive effect of coursework on teacher efficacy. The results from these studies had enormous inferences for educational policy given

that states license teachers who have fulfilled the required coursework for a degree yet who have not had any pedagogical training (Darling-Hammond, Chung, & Frelow, 2002; Darling-Hammond, 2000).

Wilson and Floden (2003) also examined a number of studies that consisted of educational degrees and coursework as aspects of teacher quality. Contrary to Darling-Hammond's findings, Wilson and Floden concluded that it was questionable to verify the significance of educational degrees and coursework. However, most meta-analyses appear to confirm that coursework preparation may have a slight to reasonable positive outcome on student performance, particularly in the areas of mathematics (Amadalo, Wasike, & Wambua, 2011; Zhang, McInerney, & Frechtling, 2011) and science (Zhang, McInerney, & Frechtling, 2011).

Stronge et al (2011) stated, "The ability to apply and integrate knowledge or skills to a particular population in a specific setting is the key to characteristics of an effective teacher" (p. 339). Ingvarson & Rowe (2008) concluded that more studies on the subject of teacher coursework preparation and degrees earned would be beneficial due to the lack of irrefutable data and the existence of inconsistent results. Although there may be certain circumstances in which subject matter preparation may predict teacher quality, there is apparently insufficient evidence to depend on these factors alone. Given that a majority of school districts increase teacher salaries based upon advanced coursework and degrees, these data might possibly serve as significant inferences for use by school districts and policy makers.

Teacher Certification

Cochran-Smith et al. (2012) argued that establishing certification requirements is the most important common state mandate proposed to enhance teacher quality. Consistent with Cochran-Smith et al. and Darling-Hammond et al. (2002), Koppich, Humphrey, and Hough (2007) emphasized that teacher certification is the key to ensuring teacher quality. This assertion was supported by others (Georges, Borman, & Lee, 2010; Harrell & Eddy, 2011; Wayne & Youngs, 2003) who claimed that certification is vital to successful teaching outcomes in a particular subject, namely mathematics.

In a large-scale review of state policy evidence concerning teacher quality and student achievement, Darling-Hammond (2000) established that the most significant forecaster of student achievement is a state's quantity of certified teachers. In another large-scale study, Laczko-Kerr and Berliner (2002) found that students who were more frequently taught by certified teachers surpassed those who were taught by under-certified teachers (i.e., emergency, temporary, or provisionally certified), which resulted in an additional 20% of academic improvement per year.

Rice (2003) indicated that there are numerous types of teacher certification that include regular (or standard), provisional, advanced, emergency, alternative, and private school certifications. Thus, due to the rising need for qualified teachers, numerous states allow the hiring of teachers who are either uncertified or whose certification is acquired through nontraditional means (Albina, 2012; Kaplan, 2012; Schonfeld & Feinman, 2012; Tricarico & Yendol-Hoppey, 2012). In a report focused on qualified teachers in California, Darling-Hammond (2004) wrote, "among school resources, teacher certification status has been the strongest predictor of school-level student achievement in mathematics and reading followed by teacher experience" (p. 44). Goe (2002) noted that the percentage of emergency

permits was greatest in schools that had the lowest student achievement rates and in which socioeconomic status was found to be the most reliable forecaster of student success.

Experience

Researchers indicate that although teacher experience does have a positive effect, there is uncertainty as to whether or not this result is linear. In regard to the various types of teacher preparation effects on student results, Rivkin, Hanushek, and Kain (2005) identified a significant positive effect of a teacher's first two to three years of experience on student test scores, which was followed by an equalizing effect in subsequent years. There seems to be a shortage of studies to determine whether teacher outcomes can be improved through additional training.

Similarly, Sanders (2001) acknowledged that although the connection between teacher experience and student success has been investigated, there is no consensus among researchers regarding the quantity of years that makes a teacher "experienced." Experience between 3 to 8 years appeared to be the rationale for effectiveness. Correspondingly, Darling-Hammond (2000) signified that the association between teaching experience and teacher effectiveness is not constantly linear and has an inclination to even out before decreasing. More recent studies of the relationship between teacher experience and student achievement have resulted in similar findings (Tran & Nathan, 2010; Van Maele & Van Houtte, 2012).

Verbal Ability

Aloe and Becker (2009) suggested that when earlier studies were investigated by researchers on the effect of student achievement resources, verbal ability consistently had the most positive outcomes. Whitehurst (2002) indicated that each study, which involved an applicable assessment of a teacher's verbal or cognitive ability, accounted for more discrepancy than other distinctive features common among teachers. Other studies of the relationship between teacher verbal ability and teacher effectiveness as measured by student achievement yielded similar findings (Andrew, Cobb, & Giampietro, 2005; Fabry, 2010; Lanouette, 2012; Strong, Gargani, & Lu, 2011).

Content Knowledge

According to Cohen et al (2010), teaching a course entails more than superficial knowledge of the subject. In other words, the more immersed that a teacher fully understands a particular content area, that knowledge presumably may be transferred onto students. As long as the teacher is teaching in his or her field of competency, there is a reasonable amount of affirmation to support this perception of competency. According to Darling-Hammond (2000), knowledge of subject matter, similar to degrees and certification, is sometimes regarded as a substitute for a teacher's aptitude. According to King-Rice (2003), teachers who acquired mathematics certification achieved higher subject matter knowledge test scores. In other research related to the assessment of content knowledge studies, Buschang, et al. (2012) found that out of 30 studies, 17 denoted a positive relationship between content knowledge and achievement, whereas 14 demonstrated no relationship.

Although Johnson et al. (2012) declared that research regarding the association of a teacher's subject knowledge with student achievement in high-need schools is somewhat unclear, Darling-Hammond (2000) indicated earlier that various researchers have proposed that a teacher's extended understanding of subject matter content for mathematics teachers is crucial. However, Darling-Hammond further argued that omitting the conceptual understanding of mathematical connotations, and teaching mathematics, forms a conceptual context that is incomprehensible. Reports on teacher evaluation procedures and curriculum decision-making substantiate Darling-Hammond's position (Mangiante, 2011; Shernoff et al., 2011).

Pedagogical Knowledge and Training

The U.S. Department of Education (2002) affirmed that research connecting pedagogical knowledge and teacher quality "has been called into question" (p. 37), and a connection does not exist. However, others (Darling-Hammond, 2008; Konig & Blomeke, 2012; Marzano, Pickering, & Pollock, 2010; Wise, 2002) have argued with this claim. Strong (2012) asserted that the National Council for the Accreditation of Teacher Education (NCATE) and the National Commission on Teaching and America's Future (NCTAF) (2003) provide research that firmly defends pedagogical knowledge as a teacher quality criterion.

The National Teachers' Exam (NTE) had been reviewed as the most important instrument in connection to teacher quality; however, the conclusions vary. Numerous correlational studies provide weak associations between NTE scores and teacher performance as reported by supervisor or principal observation assessments (Strong, 2012). For example, Strong acknowledged that other factors, including cultural responsiveness, may affect the association between teacher quality and pedagogical knowledge. Villegas & Lucus (2002) provide six qualities of being culturally responsive: (a) understanding how learners construct knowledge, (b) using appropriate instructional strategies, (c) learning about students' lives, (d) being socioculturally conscientious, (e) holding affirming views about diversity, and (f) advocating for all students.

Strong (2012) indicated that although applying culturally responsive pedagogy is not a traditional replacement of teacher quality within policy, it is viewed as an important attribute within the teaching community according to Darling-Hammond (2010b), Hollins and Guzman (2005), and Villegas and Lucus (2002). Therefore, additional experimental research on cultural responsiveness is needed in order to affect policy, as indicated by Darling-Hammond, 2010a, Howard, 2011, Nieto, 2010, and Paige, 2011. Ladson-Billings and Darling-Hammond (2000) conceded that a large amount of research "suggests that there are some aspects of teaching to student learning that may be differently valued and represented in the repertoires of successful teachers in urban minority contexts" (p. 4).

Berliner and Nichols (2008) suggested that pedagogy is one of the rational acts of teaching. Although some individuals associate subject matter with the ability to teach, others believe that in order to be an effective teacher, knowledge of subject matter must be coordinated with the knowledge of how students learn (Cole, 2012). According to Strong et al (2011), individuals whose fundamental system is based on professional knowledge as being the chief component in describing an effective teacher place certain importance on this quality.

Self-Efficacy Theory

Mainly due to the work of Albert Bandura, self-efficacy has a widely acclaimed theoretical foundation (Bandura, 1977, 1986), an extensive knowledge base (Bandura, 1997), and a proven record of application in the workplace (Stajkovic & Luthans, 1998). Nine large-scale meta-analyses consistently demonstrate that the efficacy beliefs of organization members contribute significantly to their level of motivation and performance (Bandura & Locke, 2003).

Self-efficacy (also known as social cognitive theory or social learning theory) is a person's belief that she/he is capable of performing a particular task successfully. Self-efficacy has three dimensions: magnitude, the level of task difficulty a person believes she can attain; strength, the conviction regarding magnitude as strong or weak; and generality, the degree to which the expectation is generalized across situations. An individual's sense of capability influences her/his perception, motivation, and performance. People rarely attempt to perform a task when they expect to be unsuccessful.

Self-efficacy has powerful effects on learning, motivation, and performance; because people try to learn and perform only those tasks that they believe they will be able to perform successfully. Self-efficacy affects learning and performance in the following ways (Bandura, 1982):

Self-efficacy influences the goals that people choose for themselves. Persons with low levels of self-efficacy tend to set relatively low goals for themselves. Conversely, an individual with high self-efficacy is likely to set high personal goals. Research indicates that people not only learn but also perform at levels consistent with their self-efficacy beliefs.

Self-efficacy influences learning as well as the effort that people exert on the job. People with high self-efficacy generally work hard to learn how to perform new tasks, because they are confident that their efforts will be successful. Persons with low self-efficacy may exert less effort when learning and performing complex tasks, because they are not sure the effort will lead to success.

Self-efficacy influences the persistence with which people attempt new and difficult tasks. People with high self-efficacy are confident that they can learn and perform a specific task. Thus, they are likely to persist in their efforts even when problems surface. Conversely, individuals with low self-efficacy, who believe they are incapable of learning and performing a difficult task, are likely to give up when problems surface. In an extensive literature review on self-efficacy, Albert Bandura and Edwin Locke concluded that self-efficacy is a powerful determinant of job performance (Bandura & Locke, 2003).

Sources of Self-Efficacy

Since self-efficacy can have powerful effects on teachers, it is important to identify its origin. Bandura has identified four principal sources of self-efficacy: past performance, vicarious experience, verbal persuasion, and emotional cues (Bandura, 1997).

Past performance. According to Bandura, the most important source of self-efficacy is past performance. People who have succeeded on job-related tasks are likely to have more confidence to complete similar tasks in the future (high self-efficacy) than individuals who have been unsuccessful (low self-efficacy). School administrators can boost self-efficacy

through careful hiring, providing challenging assignments, professional development and coaching, goal setting, supportive leadership, and rewards for improvement.

Vicarious experience. A second source of self-efficacy is through vicarious experience. Seeing a co-worker succeed at a particular task may boost one's self-efficacy. For example, if your co-worker learns to teach online courses, this may increase your confidence that you can teach online courses as well. Vicarious experience is most effective when you see yourself as similar to the person you are modeling.

Verbal persuasion. The third source of self-efficacy is through verbal persuasion. Essentially this involves convincing people that they have the ability to succeed at a particular task. The best way for a leader to use verbal persuasion is through the *Pygmalion effect*. The Pygmalion effect is a form of a self-fulfilling prophecy in which believing something to be true can make it true.

Most educators are familiar with Rosenthal and Jacobson's (1968) classic study in which teachers were told that one group of students had very high IQ scores (when in fact they had average to low IQ scores), and the same teacher was told that another group of students had low IQ scores (when in fact they had high IQ scores). Consistent with the Pygmalion effect, the teacher spent more time with the students they thought were smart, gave them more challenging assignments, and expected more of them—all of which led to higher student self-efficacy and better student grades.

Emotional cues. Finally, Bandura argues that emotional cues dictate self-efficacy. A person who expects to fail at some task or finds something too demanding is likely to experience certain physiological symptoms: a pounding heart, feeling flushed, sweaty palms, headaches, and so on. The symptoms vary from individual to individual, but if they persist may become associated with poor performance.

Teacher Efficacy: A Theoretical Perspective

According to Goddard, Hoy, and Woolfolk Hoy (2004), the construct of teacher efficacy has evolved from Rotter's (1966) locus of control theory and Bandura's (1977, 1986, 1997) social cognitive theory.

Rotter's Locus of Control Theory

Rotter's (1966) locus of control theory refers to the extent to which individuals believe that they can control events that affect them. Simply stated, locus of control is the principle that an anticipated ending is within one's dominion. According to Pendergast et al (2011), the two concepts of locus of control and self-efficacy are frequently obscured. For example, Rotter's locus of control was ascertained as a "generalized expectancy" whereas Bandura's (1997) self-efficacy was more specific to a particular task and situation.

Bandura's Social Cognitive Theory

Bandura's (1977) social cognitive theory suggested that a hard-working participant in the learning process is taught through shared or social connections and modeled occurrences. Concealed within the theory is the motivational view of self-efficacy or the view that one embraces in regard to his or her aptitude of achieving a specific task.

For example, typically, pre-service teachers who desire to gain knowledge when teaching students how to read seek the advice of an experienced mentor and then have the liberty to teach brief lessons followed by teacher-mentor discussions. Subsequently, the pre-service teacher undergoes a sense of readiness and assuredness to competently instruct upcoming students. By doing so, achievement is acquired most of the time (Hoy & Woolfolk, 1990).

Teacher effectiveness is described in the following two dimensions: general teaching efficacy (GTE) and personal teaching efficacy (PTE).

General teaching efficacy (GTE). General teaching efficacy (GTE) refers to the relationship between teaching and learning (Hebert, Lee, & Williamson, 1998; Hoy & Woolfolk, 1990) which is further clarified as the belief that teachers are able to bring about positive student changes despite environmental out-of-school constraints (Ross, Cousins, & Gadalla, 1996) that affect teaching and learning (i.e., heredity, poverty, domestic and televised violence, parental value on education, etc.) (Soodak & Podell, 1996; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998; Tschannen-Moran, & Woolfolk Hoy, 2001).

Personal teaching efficacy (PTE). Personal teaching efficacy (PTE) is more specific than GTE because the concept applies to an individual teacher's belief in his or her own teaching ability (Hebert & Williamson, 1998; Hoy & Woolfolk, 1990) and indicates the confidence that a teacher possesses based on training, experience, or past successes (Tschannen-Moran et al., 1998). In other words, GTE is the belief that teachers can make a difference, whereas PTE is the self-efficacy belief that "I can make a difference" (Siwatu, Frazier, Osaghae, & Starker, 2011). Because GTE and PTE are independent of one another, teachers may have a strong belief that they can generally reach students yet at the same time be less than confident in their own teaching abilities (Knoblauch & Whittington, 2002).

Sources of Teacher Efficacy

As previously mentioned, Bandura (1997) included four sources of self-efficacy: past performance, vicarious experience, verbal persuasion, and emotional cues. Tschannen-Moran et al. (1998) claimed that through an examination of teaching tasks and self-conceptions of teaching aptitudes, the comparable four sources subscribe as well to a teacher's sense of efficacy.

Henson (2002) affirmed that while the cognitive development stage is theoretically stable, empirical research designed to analyze the soundness and probable influence of developed teacher efficacy sources is limited. Thus, research is needed to further confirm the Tschannen-Moran et al (1998) model and to analyze the sources by which teacher efficacy is developed. In particular, research should be conducted to examine Bandura's four sources of teacher self-efficacy as well as the association between teacher characteristics as described in the Tschannen-Moran et al model (i.e., years of experience, teaching level, professional development knowledge, and teacher efficacy). Two recent studies provide partial support for Bandura's sources of self-efficacy and Tschannen-Moran et al (1998) model, specifically increasing in-service teachers' self-efficacy through content knowledge (Swackhamer, Koellner, Basile, & Kimbrough, 2009), teaching experience (Bosma, Hessels, & Resing, 2012), and professional development (Stewart, 2012).

Contextual Factors Influencing Teacher Efficacy

Tschannan-Moran and Woolfolk Hoy (2001) proposed that aptitude and task assessments should be included as suitable measures of teacher efficacy as they relate to the sustained and limited efforts within the teaching profession. These findings have ramifications for schools operating under the misconception that all teachers must consistently provide low level and passive instruction in order to equip students to perform on proficient levels in response to the NCLB accountability standards.

Friedman and Kass (2002) affirmed that the influence of school environment, a principal's leadership style, community involvement, and decision-making create an impact on a teacher's personal and collective efficacy. Thus, relationships within the school can function as either a positive reinforcement or a negative interference in the general learning population (Hoy, Tarter, & Woolfolk Hoy, 2006; Kurt, Duyar, & Calik, 2012).

Correlates of Teacher Efficacy

A literature review provided support for a link between a teacher's sense of self-efficacy and other important variables, including time spent on interactive teaching (Chong & Kong, 2012; Clark & Greer, 2011); use of new teaching strategies (Powell-Moman & Brown-Schild, 2011; Shu & Franklin, 2011; Tella, 2011; Ying, Connor, Yang, Roehrig, & Morrison, 2012); teacher burnout (Brown, 2012; Skaalvik & Skaalvik, 2007); and commitment to teaching (Bates, Latham, & Kim, 2011; Cayci, 2011; Khurshid, Qasmi, & Ashraf, 2012; Pendergast, Garvis, & Keogh, 2011; Viel-Ruma, Houchins, Jolivet, & Benson, 2010). Teachers with a high level of self-efficacy demonstrated less anxiety and a higher inner locus of control than those who had a low sense of efficacy (Greenwood, Olejnik, & Parkay, 1990; Lunenburg & Cadavid, 1992). For example, higher-efficacy teachers volunteered for extra-curricular school activities in an effort to increase their self-awareness (Somech & Drach-Zahavy, 2000).

Outcomes of Teacher Efficacy

Several scholars have indicated that a teacher's sense of efficacy has been associated with two major variables: teacher behavior (Bostock & Boon, 2012; Cayci, 2011; Clark & Greer, 2012; Khurshid, et al., 2012; Powell-Moman & Brown-Schild, 2011; Power, Plevyak, & DeWitt, 2012; Shu & Franklin, 2011; Viel-Ruma, et al., 2010) and student achievement (Fancera & Bliss, 2011; Lumpe, Czerniak, Haney, & Beltyukova, 2012; Marat, 2007; Mohamadi & Asadzadeh, 2012; Moolenaar, Slegers, & Daly, 2012). A variety of attributes and experiences have been linked to teacher efficacy beliefs, including content knowledge (Swackhamer et al., 2009), personal characteristics (Bosma et al., 2012; Brown, 2012; Klassen & Chiu, 2010; Mehdinezhad, 2012; Skaalvik & Skaalvik, 2007), and environmental factors (Collie, Shapka, & Perry, 2012; Hughes, 2012). According to Desouza, Boone, & Yilaz (2004), beginning teachers who display a low level of stress tend to have a higher sense of efficacy concerning science instruction simply because they hold a bachelor of science degree or are capable of responding correctly to difficult questions (Aggul, 2011).

Summary

In this conceptual analysis, we reviewed the research literature that was relevant to teacher quality variables and efficacy for teaching minority students. We included an examination of the importance of teachers; defined teacher quality; and discussed the components of teacher quality, including knowledge of subject matter, teacher degree and coursework, teacher certification, experience, verbal ability, content knowledge, and pedagogical knowledge and training. Self-efficacy and teacher efficacy and related variables were also discussed. Accordingly, educational leaders have been provided with a strong rationale for the importance of teacher quality and teacher efficacy in their professional practices.

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