

Editor's Note

Xiaoping Li, Ed.D.
Central Michigan University

Welcome to the fall issue of *The Charter Schools Resource Journal*. It is an honor and a pleasure for me to present two articles to our readers.

In the first article titled *Urban School Teachers' Self-Efficacy Beliefs and AYP Status*, Drs. Bryant and Yan utilized a quantitative descriptive study to determine if there was a difference between teachers' self-efficacy beliefs depending on the AYP status of kindergarten to twelfth grade urban schools. They found that there was in fact a relationship between the AYP status and teachers' self-efficacy beliefs in the dimensions of student engagement, instructional strategies, and classroom management. These findings are important in this era of educational reform which is designed to make teachers in the schools more accountable for improving their students' achievement on mandated state and/or national tests.

In the second article titled *Online Education and Its Potential for Hiring: Perceptions from Principals and Superintendents*, Drs. Zhang and Corbett explored the perceptions of principals, superintendents, and hiring personnel regarding hiring candidates with or without online education experience. Their findings are intriguing. Although the K-12 hiring administrators had low confidence in the outcomes of online learning, they preferred to have candidates with 25% of their courses taken online and believed that online learning will be part of their school's long-term strategies.

In short, both articles are well researched, timely, and tackle two important issues in education, teacher self-efficacy and educational technology. I would like to thank all the authors and editorial board members for their hard work. As always, your comments related to the journal will be greatly appreciated.

Happy Reading!

Urban School Teachers' Self-Efficacy Beliefs and AYP Status

Linda Bryant, Ed.D.
Pittsburgh Public Schools

Wenfan Yan, Ph.D.
University of Massachusetts - Boston

This quantitative descriptive survey study examined the relationship between teachers' self-efficacy beliefs and adequate yearly progress (AYP) status for a sample of teachers (N = 894) from the elementary, middle, and high schools in a large urban school district in the northeastern part of the United States of America.

Introduction

Historically, public education in America has been based on the general principle that every child has the right to receive a quality education. For more than four decades, the Congress of the United States has passed legislation to help states improve educational opportunities for America's children, beginning with the Elementary and Secondary Education Act of 1965 (ESEA). ESEA along with the Improving America's Schools Act of 1994 (IASA) formed the basis of the No Child Left Behind Act of 2001 (NCLB), which called for increased accountability for states, school districts, and schools to improve student achievement and close achievement gaps (U.S. Department of Education, 2004). Although the NCLB law presents a number of challenges for schools and districts that do not make adequate yearly progress (AYP), there is a growing body of research that shows there are a number of factors that contribute to academic performance and school failure (Amrein & Berliner, 2003; Berliner & Biddle, 1995; Dorgan, 2004).

There is evidence to support the idea that teachers' beliefs in their ability to instruct students can influence how well students learn, even those students who are undisciplined or unmotivated (Gibson & Dembo, 1984; Tschannen-Moran, Woolfolk Hoy & Hoy, 1998; Pas, Bradshaw, Hershfeldt, & Leaf, 2010; Rose & Medway, 1981; Soodak & Podell, 1996; Woolfolk, Rosoff, & Hoy, 1990). Studies have documented that efficacious teachers (a) accept responsibility for their students' successes and failures, (b) are more enthusiastic about implementing innovations, (c) tend to encourage more student autonomy, (d) show a more positive attitude toward low achieving students, (e) are able to communicate clear expectations to their students, and (f) show a greater commitment to teaching (Ashton & Webb, 1986; Coladarci, 1992; Guskey & Passaro, 1994; Ross, 1998). Additionally, a number of research studies suggest that teachers' efficacy beliefs may underlie critical instructional decisions that could affect teacher effectiveness and positive student outcomes, thus supporting a relationship between teachers' self-efficacy beliefs and student achievement (Ashton & Webb, 1986; Chong, Klassen, Huan, Wong, & Kates, 2010; Gibson & Dembo, 1984; Rimm-Kaufman & Sawyer, 2004; Soodak & Podell, 1996).

It is evident that there is much in the research literature to address the factors that affect school success and failure, but little has been done to address the external and internal factors that affect teachers in schools that are identified as failing, in need of improvement, or not meeting adequate yearly progress by their national or state political structures (Darling-Hammond, 1997; Dorgan, 2004).

Purpose of the Study

Ashton and Webb (1986), and Anderson, Greene, and Loewen (1988) were among the first educational researchers to identify a powerful relationship between teacher's self-efficacy beliefs and its impact on student outcomes. However, little is known about how these self-efficacy beliefs are affected by national and state mandated policies designed to hold teachers accountable for following rigorous state standards and for assessing and measuring student academic progress toward meeting those standards (MacCarty, 2005). The primary purpose of this quantitative descriptive study was to determine if there is a difference between teachers' self-efficacy beliefs in the dimensions of student engagement, instructional strategies, and classroom management for the Kindergarten to twelfth grade urban schools that are categorized as AYP and Non-AYP by national and state guidelines for achieving adequate yearly progress (AYP) for student academic progress.

Theoretical Framework

The research literature reveals that through the years, teacher efficacy has been associated with several theoretical perspectives. While some researchers based the meaning and measure of teacher efficacy on Rotter's (1966) social learning theory, or Weiner's (1974) attribution theory, Bandura's (1977, 1986, 1997) social cognitive theory was widely used to interpret the results in teacher efficacy studies.

Bandura's Social Cognitive Theory

Bandura's (1983, 1991, 1994, 1997) social cognitive theory explains human behavior as operating within a continuous reciprocal relationship between personal factors in the form of cognition, behavioral factors, and environmental influences. He states that "in this transactional view of self and society, internal personal factors in the form of cognitive, affective, and biological events; behavior; and environmental events all operate as interacting determinants that influence one another bidirectionally" (1997, p. 6). Consequently, social cognitive theory "avoids a dualism between individuals and society and between social structure and personal agency" (p. 6). Bandura's (1986) social cognitive theory is imbedded in the belief that there are certain human capabilities that provide people with the cognitive means to influence and determine their own destiny. These five basic capabilities are described as: (a) symbolizing, the capability of human beings to use a variety of symbols to extract meaning from their environment and use this process to model observed behaviors; (b) forethought, the capability to plan a course of action and anticipate consequences of these actions; (c) vicarious learning, the capability to not only to learn from direct experience, but also to learn from observing others; (d) self-regulatory mechanism, the capability to use internal control mechanisms to mediate external influence and exert control over one's thoughts, feelings, and actions; and (e) self-reflection, the capability to

be “distinctly human” (p. 21) by engaging in self-evaluation to analyze one’s own experiences and thought processes.

Self-efficacy is the core of Bandura’s social cognitive theory (Bandura, 1997; Pajares, 2002). According to Bandura (1997), “it is important to distinguish between social cognitive theory and the self-efficacy component of the theory, which operates in concert with other determinants in the theory to govern human thought, motivation, and action” (p. 34). Bandura asserts that self-efficacy theory “treats the efficacy belief system not as an omnibus trait but as a differentiated set of self-beliefs linked to distinct realms of functioning” (p. 36). Bandura (1997) posits that efficacy beliefs help determine the outcomes one can expect. Furthermore, he believes that people can even guide their lives by their personal efficacy beliefs. Bandura defines perceived self efficacy as “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p. 3). In summary, Bandura (1994) argues that when people have a strong sense of efficacy, their accomplishments and well being is enhanced in a number of ways.

Integrated Model of Teacher Efficacy

Tschannen-Moran, Woolfolk, Hoy, and Hoy (1998) developed an integrated model of teacher efficacy which is deeply grounded in Bandura’s (1977) construct of self-efficacy. Bandura’s model that is based on a process that describes how efficacy beliefs are created, assessed, used, and finally lead to new beliefs. The Tschannen-Moran et al. (1998) model is also based on the assertion that teacher efficacy is context specific. The researchers recognize that “teachers feel efficacious for teaching particular subjects to certain students in specific settings, and they can be expected to feel more or less efficacious under different circumstances” (pp. 227-228). Consequently, this model is based on two dimensions: the teacher’s self perception of teaching competencies, and the teaching tasks and their context. The researchers point out that “the judgment a teacher makes about his or her capabilities and deficits is self-perception of teaching competence, while the judgment concerning the resources and constraints in a particular teaching context is the analysis of the teaching task”(p. 231).

In this cyclical model, Tschannen-Moran, Woolfolk-Hoy, and Hoy (1998) identify four sources that affect a teacher’s ability to assess his or her personal teaching competence, and to analyze the teaching task. Tschannen-Moran and her colleagues (1998) assert that these teacher judgments are based on Bandura’s (1977) four sources of efficacy beliefs: mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal. They also emphasize that teachers use cognitive processes to reflect on their teaching experiences and the personal factors they bring to the teaching task. As a result, a teacher’s efficacy belief is determined partly by comparing whether or not “his or her current abilities and strategies are adequate for the teaching task in question” (p. 233). Finally, this cyclical model shows that the resulting efficacy belief has a tremendous influence on the teacher’s goals, effort and persistence which in turn impact performance (Fives, 2003; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). This model gives the teacher efficacy construct a clear and concise meaning and allows educational researchers to identify specific areas of teacher beliefs and the relationships between these beliefs, domains of teaching tasks, teacher performance outcomes, and student achievement (Ashton & Webb, 1986; Fives, 2003; Friedman & Kass, 2002; Soodak & Podell, 1998; Tschannen-Moran et al., 1998).

Review of Literature on Teacher Efficacy Beliefs

A body of educational research on teaching and learning has established a relationship between the construct of teacher's sense of efficacy and teacher behaviors that promote positive student outcomes. This relationship has been established through evidence obtained from research studies, which used a variety of measurement instruments. This evidence implies that teachers with high efficacy beliefs think and behave differently in the classroom than teachers with low efficacy beliefs. Consequently, the behavior of highly efficacious teachers results in greater student achievement outcomes (Ashton & Webb, 1986). There is also research to support that teacher efficacy beliefs are related to student outcomes when examining specific teaching tasks that include implementing instructional strategies, engaging students in classroom activities, and managing students in the classroom (Allinder, 1995; Anderson, Greene, & Loewen, 1988; Armor et al. 1976; Ashton & Webb, 1986; Berman, McLaughlin, Bass, Pauly, & Zellman, 1977; Chong, Klassen, Huan, Wong, & Kates, 2010; Daugherty, S. 2005; Milner & Woolfolk Hoy, 2001; Pas, Bradshaw, Hersfeldt, & Leaf, 2010).

The research study by Daugherty (2005) examined 891 teachers' sense of efficacy and its relationship to their characteristics of teaching experience, instructional level, and professional development in a large suburban school district in southeast Texas. The researchers used Teachers' Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001) with its three subscales for efficacy in instructional strategies, student engagement, and classroom management. A self-report measure of teacher behaviors was also used. Using a multiple regression analysis, Daugherty (2005) found that efficacy in instructional strategies was a significant predictor of teacher behaviors identified in five areas: (a) the learning environment, (b) motivating students, (c) using the curriculum, (d) giving instruction or assessing, and (e) engaging the struggling learner. Daugherty found that efficacy in student engagement was a significant predictor for three teacher behaviors (engaging the struggling learner, motivating students, and giving instruction or assessing). Finally, the researcher found that efficacy in classroom management was not a significant predictor of any of the teacher behaviors. The findings in this study concluded that these results are consistent with previous research studies that found a strong relationship between teacher efficacy and teaching behaviors.

Another study by Rimm-Kaufman and Sawyer (2004) used a school district in the Northeast United States to examine the relationship between elementary teachers' self-efficacy beliefs and their use of an instructional strategy, known as the Responsive Classroom Approach. This instructional strategy includes classroom practices designed to creatively engage students in the learning process by integrating caring into the daily routine as well as providing a "proactive approach to discipline that helps children acquire self-control and take responsibility for their actions" (p. 325). The study examined how 69 general education teachers' experience with the Responsive Classroom approach related to their self-efficacy beliefs. Secondly, the study examined how the teachers' experience with the Responsive Classroom Approach related to their classroom management, disciplinary, and teaching practices. The study used an adapted version of Bandura's Teacher Efficacy Scale (1994) to assess the teachers' feelings of self-efficacy in the areas of disciplinary self-efficacy, instructional self-efficacy, efficacy to create a positive school environment and efficacy to influence decision making. This study found that teachers with more

experience using the Responsive Classroom Approach instructional strategy reported higher feelings of self-efficacy in the areas of disciplinary self-efficacy, instructional self-efficacy, and efficacy to create a positive school environment. Additionally, the study found that teachers that were high in one type of self-efficacy were also high in another type. Finally, the study found that there was not an association between school type or teachers' characteristics and teachers' self-efficacy. These researchers concluded that their findings were consistent with the "larger body of research on teachers' self-efficacy showing an association between teachers' practices and high self-efficacy beliefs" (p. 334).

An additional study by Wertheim and Leyser (2002) investigated teachers' self-efficacy beliefs and their choices of instructional strategies in an inclusive learning environment, using a sample of 191 Israeli preservice general education teachers. This study used a Hebrew version of Gibson and Dembo's (1984) Teacher Efficacy Scale to measure the respondents' self-efficacy beliefs in the domains of personal teaching efficacy and teaching efficacy, as well as a questionnaire about instructional interventions to measure the "teachers' perceptions regarding the acceptability of instructional practices identified as related to effective teaching and successful mainstreaming" (p. 56). These researchers found that there was a high correlation between the preservice teachers' self-efficacy beliefs in the domain of personal teaching efficacy and their willingness to use a variety of instructional approaches with students with diverse educational needs. However, they found that there was no significant correlation between the teaching efficacy domain and willingness to use differentiated instructional strategies. Wertheim and Leyser conclude that "this result suggested that the degree to which a student teacher believes that teachers can foster student academic achievement, despite negative external factors, was not related to their choices of instructional strategies or perception of their effectiveness" (p. 57).

These research studies represent some of the many studies that investigated the relationship between teachers' sense of efficacy and positive student outcomes when examining efficacy in instructional strategies, efficacy in student engagement, and efficacy in classroom management. These studies are part of a larger body of research that clearly suggests that while the construct of teacher efficacy is a powerful self-perception that reflects teachers' belief that they can bring about increased student learning in the classroom, it also tends to be complex and needs to be further clarified and examined in future research.

Research Method

Instrumentation

Tschannen-Moran and Woolfolk Hoy's (2001) *Teachers' Sense of Efficacy Scale (TSES)* was used to assess the teachers' sense of efficacy. The reliability for the 24-item instrument was 0.94. Reliabilities were also reported for the three subscales. They were 0.87 for student engagement, 0.91 for instructional strategies, and 0.90 for classroom management.

This instrument was rearranged into four sections, three of which reflected the subscales and described as different dimensions of teacher efficacy. These are identified by Tschannen-Moran and Woolfolk Hoy (2001) as "efficacy in student engagement, efficacy in instructional strategies and efficacy in classroom management" (p. 801). The first section assessed the dimension of

efficacy for student engagement and contained eight Likert-type items. This section allowed the teacher to report how much confidence he or she displays when providing learning activities for students and motivating them to become independent thinkers and learners. An example of an item in this first section is “How much can you do to help your students think critically?” The respondents marked one number ranging from 1 (*Nothing*) to 9 (*A Great Deal*) to express their beliefs. Participants who scored high indicated a belief in their ability to engage even the most difficult student in a productive learning activity, whereas a teacher who scored low may have the belief that there is little he or she can do to engage a student in learning a concept.

This same procedure is also used for section two, which contains the second dimension of teacher self-efficacy, namely, efficacy in instructional strategies. This section assessed a teacher’s confidence in his or her ability to provide an array of instructional strategies to accommodate the students’ learning styles. An example of one of these eight items is, “How much can you do to adjust your lessons to the proper level for individual students?” A high score indicates a high belief in the teacher’s ability to match instructional strategies to meet the learning needs of students. A low score reflects a low belief in that ability. Section three assessed the third dimension known as efficacy in classroom management. This section dealt with how strongly the teachers felt about their confidence and ability to manage students’ behaviors in the learning environment. This is exemplified in the following item from the *Teachers’ Sense of Efficacy Scale*: “How much can you do to calm a student who is disruptive and noisy?” Once again, a high score reflected how confident a teacher was in his or her ability to manage student behavior in the classroom. A low score indicated a lack of confidence in this area. The fourth and final section of the survey asked forced multiple choice questions about the demographics of the participants.

Data Collection Procedures

The Adequate Yearly Progress (AYP) status levels for the AYP and Non-AYP schools, and the student population data was obtained from the Pennsylvania Department of Education web site data base. Additional information about school socioeconomic status and student demographics was obtained from the Pittsburgh Public Schools web site data base.

The survey questionnaires were delivered to teachers in the thirty-eight AYP and the twenty-two Non-AYP elementary, middle and high schools in the Pittsburgh Public Schools system. A total of 2,219 surveys were distributed to 1,215 teachers in the AYP schools and 1,004 teachers in the Non-AYP schools. There were 894 usable surveys returned for an overall response rate of 40.3%. Of these, 469 (52.5%) were returned by teachers in the AYP schools and 425 (47.5%) were returned by teachers in the Non-AYP schools.

Data Analysis Procedures

Descriptive statistics and inferential statistics including t-tests, ANOVA, and regression analyses were used to describe and examine the perceptions of teacher efficacy beliefs in the AYP and Non-AYP schools. The dependent variable in this study includes teacher perceptions of self-efficacy. Self-efficacy was examined in three dimensions: (a) efficacy in instructional strategies, (b) efficacy in classroom management, and (c) efficacy in student engagement. The independent

variables have two levels: individual and school. Individual characteristics selected for this study include gender, ethnicity, and teaching experience. The school level factors selected for this study include AYP status, school type, percentage of minority students, and percentage of low SES students.

Findings

Efficacy for Student Engagement in the AYP and Non-AYP Schools

The results of this study show that for the first dimension of student engagement, there are significant differences between the responses of teachers in AYP schools and those in the Non-AYP schools for all eight variables, indicating that on the average, teachers in the AYP schools feel more confident in their “capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated” (Tschannen-Moran & Woolfolk Hoy, 2001, p.783). More specifically, teachers in the AYP schools felt that they had quite a lot of confidence in their ability to help students think critically, to get students to believe they could do well, and to foster student creativity, while teachers in the Non-AYP schools felt they had only some influence to engage their students to do the same. Both the teachers in the AYP and Non-AYP schools felt they had some influence to engage and motivate difficult students, to get their students to value learning and to improve the understanding of students who are failing, however, the teachers in the AYP schools reported a higher level of efficacy in their ability to accomplish these teaching tasks. It is interesting to note that both the AYP and Non-AYP groups reported feeling less confident about their ability to assist families to help their students, while once again, teachers in the AYP schools reported significantly higher mean scores for this dimension.

Insert figure 1 here

Efficacy for Instructional Strategies in the AYP and Non-AYP Schools

For efficacy in instructional strategies, the study results show that both teachers in the AYP and Non-AYP schools reported feeling a strong sense of efficacy for this second dimension. Gibson and Dembo (1984) conducted an observational study of how teachers with low and high self-efficacy manage instructional activities in the classroom. They concluded that the teachers who reported a high sense of instructional efficacy, spent more time on academic activities, provided the students who needed assistance with extra support, and provided more positive reinforcement and praise for their students.

Conversely, teachers who reported a low sense of instructional efficacy spent more time on custodial non-academic activities and gave up easily on students who struggled with their class work, and criticized their failing students. The results of the present study indicate that there are

significant differences for teachers in the AYP and Non-AYP schools for efficacy in instructional strategies when it comes to gauging comprehension of the lesson and crafting good student questions. The results also reveal that there are no significant differences for responding to difficult student questions, adjusting the level of lessons for students, using a variety of assessment strategies, providing alternative explanations, or implementing alternative strategies. Surprisingly, these results also revealed that teachers in the Non-AYP schools reported a higher level of efficacy than those in the AYP schools when it comes to providing appropriate challenges for their students.

Insert figure 2 here

Efficacy for Classroom Management in the AYP and Non-AYP Schools

The results for the third dimension of efficacy in classroom management show that teachers in the AYP schools reported feeling more efficacious about their ability to manage the learning environment than the teachers in the Non-AYP schools. Ashton and Webb (1986) found that a teacher's sense of efficacy appears to be related to the teachers' classroom control and management strategies. This assertion could explain why there are significant differences between the groups of teachers in the AYP and Non-AYP schools. In spite of this, the teachers in both the AYP and Non-AYP schools report a high level of efficacy in their capacity to control problem students and classroom disruptions, as well as to respond to defiant students. Both groups of teachers also report high levels of efficacy in classroom management indicating that they have quite a lot of confidence in their ability to make clear student behavior expectations, to establish routines for operating a classroom smoothly, to emphasize following the classroom rules, and to establish a classroom management system. However, only the teachers in the AYP schools reported feeling quite a lot of confidence in their ability to calm noisy and disruptive students, while teachers in the Non-AYP schools reported feeling that they only had some influence to achieve this task. These results are reinforced by results in studies conducted by Woolfolk, Rosoff, and Hoy (1990) which found that a teacher's sense of efficacy is related to the number of classroom problems, the level of trust teachers have in their ability to manage a classroom, and the type of punishment they used for angry and disruptive students.

Insert figure 3 here

In summary, results of this study revealed that there are significant differences in the levels of self-efficacy beliefs between teachers in the AYP and those in the Non-AYP schools. These differences were adjusted for the individual factors, as well as for the school factors. This higher level of efficacy beliefs for teachers in the AYP schools could have some relationship to the goals they set for their teaching, their level of planning and organizing classroom activities

(Allinder, 1995), as well as the confidence they have in their ability to affect student learning in the face of obstacles or setbacks (Guskey, 1981; Goddard, 2001). Most importantly, these findings indicate that the higher level of teacher self-efficacy beliefs in the AYP schools could indicate that these teachers feel more enthusiastic about their pedagogy (Friedman & Kass, 2002) and have a greater commitment to teaching (Coladarci, 1992). This finding alone is critical because “teachers’ beliefs in their efficacy affect their general orientation toward the educational process as well as their specific instructional activities” (Bandura, 1997, p. 241), which in turn, could have a huge impact on student achievement in these schools.

Conclusions and Recommendations

Even though current research literature suggests that there are a number of external factors that impact teacher efficacy, some of which include school climate, school leadership, class size, student ability, student age, teacher preparation, and teacher workload (Ross, 1998; Wertheim & Leyser, 2002), the findings of this study indicate that an external factor such as the consequence of a school making or not making adequate yearly progress could also have an impact on a teacher’s sense of efficacy for student engagement, instructional strategies, or classroom management. This finding contributes another possible external factor that is linked to the construct of teacher self-efficacy. In many ways, these findings are consistent with the research literature and the theoretical conception of teacher efficacy which support the premise that external factors can influence a teachers’ sense of efficacy as well as the teachers’ behavior in the classroom (Ashton & Webb, 1986; Bandura, 1997; Woolfolk Hoy & Hoy, 2003).

Because a strong relationship exists between teachers’ reported sense of efficacy and their classroom behaviors, it is recommended that teachers become aware of how external factors affect their self-efficacy beliefs. It has been established that teachers who are aware of their self-efficacy beliefs tend to exhibit behaviors reflecting a higher sense of efficacy in their ability to perform their classroom duties than those teachers who are less aware of their self-efficacy beliefs (Daugherty, 2005; Henson, 2001). Therefore it is recommended that central office administrators design teacher training programs to include activities that allow teachers to discuss and clarify their efficacy beliefs and develop ideas of how these beliefs would be represented in their classroom behavior. Once these beliefs are clarified and teachers become more aware of their self-efficacy, a teachers’ training program can then be designed to develop ways for strengthening this sense of efficacy, especially since existing research describes teachers with a high sense of efficacy in the following manner: (a) They make a strong impact on student learning; (b) They have positive expectations for student behavior and achievement; (c) They take responsibility for their students’ learning and if their students fail, they examine their own performance for ways to increase student learning; (d) They plan for student learning; (e) They are more willing to use innovative instructional techniques; (f) They set goals for themselves; (g) They establish strategies to achieve student success, and (h) They are persistent with difficult students while referring less students for special educational services (Ashton & Webb, 1986; Guskey & Passaro, 1994; Soodak & Podell, 1996). It is clear that this type of teacher training could strengthen a teacher’s sense of efficacy beliefs and enhance the kinds of teacher behaviors that promote increased student achievement in the classroom. According to Tschannen-Moran and Woolfolk Hoy (1998), there is an assumption that a reciprocal relationship exists between a teacher’s sense of efficacy and student achievement. Because of

this, it makes perfect sense to consider ways in which a teacher's sense of efficacy can be strengthened.

The findings of this study can provide information to charter school administrators, school boards, and educators informing them about how the consequences of a school achieving or not achieving AYP could influence a teacher's perception of his or her self-efficacy, which could in turn impact student achievement. This could be important in this era of educational reform which is designed to make teachers in the schools more accountable for improving their students' scores on mandated state tests.

Even though this study indicates that there are differences in the levels of teacher efficacy in the AYP and Non-AYP schools, it does not examine how teachers develop their sense of efficacy or what factors were important to its development. It is recommended that researchers use these findings to help them plan future quantitative or qualitative studies in order to determine what factors are essential in the development of a teachers' sense of efficacy. Ashton and Webb (1986) used a self report measure to identify middle school teachers with high and low levels of teacher efficacy, then used those findings to plan an ethnographic qualitative study to examine the teaching behaviors associated with factors that influence teacher efficacy and its impact on student performance. Similarly, Milner and Woolfolk Hoy (2003) used a case study to investigate how external factors such as faculty support and respect could influence a teacher's sense of self-efficacy beliefs. These researchers demonstrated that in order to study all aspects of teacher efficacy, studies should use both quantitative and qualitative measures to examine the teaching behaviors of both efficacious and non-efficacious teachers within the classroom environment.

References

- Allinder, R. (1995). An examination of the relationship between teacher efficacy and curriculum-based measurement and student achievement. *Remedial and Special Education*, 16(4), 247-253.
- Amrein, A. L., & Berliner, D. C. (2003). The effects of high-stakes testing on student motivation and learning. *Educational Leadership*, 60(5), 32-38.
- Anderson, R., Greene, M., & Loewen, P. (1988). Relationships among teachers' and students' thinking skills, sense of efficacy, and student achievement. *Alberta Journal of Educational Research*, 34 (2), 148-165.
- Armor, D., Conry-Oseguera, P., Cox, M., King, N., McDonnell, L., Pascal, A., Pauly, E., & Zellman, G. (1976). Analysis of the school preferred reading program in selected Los Angeles minority schools (Report No. R-2007-LAUDS). Santa Monica, CA: Rand. Retrieved from <http://www.rand.org/pubs/reports/2005/R2007.pdf>
- Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. New York: Longman.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavior change. *Psychological Review*, 84, 191-215.
- Bandura, A. (1983). Self-evaluative and self-efficacy mechanisms governing the motivational effects of goal systems. *Journal of Personality and Social Psychology*, 45(5), 1017-1028.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1991). Self-regulatory mechanisms governing the impact of social comparison on complex decision making. *Journal of Personality and Social Psychology*, 60(6), 941-951.
- Bandura, A. (1994). Self-efficacy. In V.S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego: Academic Press, 1998). Retrieved from <http://www.des.emory.edu/mfp/BanEncy.html>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.
- Barfield, V., & Burlingame, M. (1974). The pupil control ideology of teachers in selected schools. *The Journal of Experimental Education*, 42(4), 6-11.
- Berliner, D. C., & Biddle, B. J. (1995). *The manufactured crisis: Myths, fraud and the attack on America's public schools*. Reading, MA: Addison-Wesley.
- Berman, P. B., McLaughlin, M. W. Bass, G. Pauly, E., & Zellman, G. (1977). Federal programs supporting educational change: Vol. VII. Factors affecting implementation and continuation (Rep. No. R-1589/7-HEW). Santa Monica, CA: Rand. Retrieved from <http://www.rand.org/pubs/reports/2005/R1589.7.pdf>
- Chong, W. H., Klassen, R. M., Huan, V. S., Wong, I., & Kates, A. D. (2010). The relationships among school types, teacher efficacy beliefs, and academic climate: Perspective from Asian middle schools. *The Journal of Educational Research*, 103, 183-190.
- Coladarci, T. (1992). Teachers' sense of efficacy and commitment to teaching. *The Journal of Experimental Education*, 60, 323-337.
- Darling-Hammond, L. (1997). *The right to learn: A blueprint for creating schools that work*. San Francisco, CA: Jossey-Bass.
- Daugherty, S. (2005). *Teacher efficacy and its relation to teachers' behaviors in the classroom* (Unpublished doctoral dissertation). University of Houston, Houston, Texas.

- Dorgan, K. (2004). A year in the life of an elementary school: One school's experiences in meeting new mathematics standards. *Teacher College Records*, 106(6), 1203-1208.
- Fives, H. (2003, April). *What is teacher efficacy and how does it relate to teachers' knowledge: A theoretical review*. Paper presented at the annual conference of the American Educational Research Association, Chicago, IL.
- Friedman, I. A., & Kass, E. (2002). Teacher self-efficacy: A classroom-organization conceptualization. *Teaching and Teacher Education*, 18(2), 675-686.
- Gibson, S. & Dembo, M.H., & (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology*, 76(4), 569-582.
- Goddard, R. D. (2001). Collective efficacy: A neglected construct in the study of schools and student achievement. *Journal of Educational Psychology*, 93(3), 467-476.
- Guskey, T. R. & Passaro, P. D. (1994). Teacher efficacy: A study of construct dimensions. *American Educational Research Journal*, 31 (3), 627-643.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York: John Wiley & Sons, Inc.
- Henson, R. K. (2001). The effects of participation in teacher research on teacher efficacy. *Teaching and Teacher Education*, 17(7), 819-836.
- Milner, H. R., & Woolfolk Hoy, A. (2003). A case study of an African American Teacher's self-efficacy, stereotype threat, and persistence. *Teaching and Teacher Education*, 19(2), 263-276.
- Pajares, F. (2002.). *Overview of social cognitive theory and of self-efficacy*. Retrieved from <http://www.emory.edu/EDUCATION/mfp/eff.html>.
- Pas, E. T., Bradshaw, C. P., Hershfeldt, P. A., & Leaf, P. J. (2010). A multilevel exploration of the influence of teacher efficacy and burnout on response to student problem behavior and school-based service use. *School Psychology Quarterly*. 25, 13-27.
- Pennsylvania Department of Education. (2005). AYP and state assessment results by school districts. Retrieved from <http://www.pde.state.pa.us/k12/org>
- Research Instruments*, (n.d.). Retrieved from <http://www.coe.ohio-state.edu/ahoy/researchinstruments.htm>
- Rimm-Kaufman, S. E., & Sawyer, B. E. (2004). Primary-grade teachers' self-efficacy beliefs, attitudes toward teaching, and discipline and teaching practice priorities in relation to the responsive classroom approach. *The Elementary School Journal*, 104(4), 321-341.
- Ross, J. A. (1998). The antecedents and consequences of teacher efficacy. *Advances in Research on Teaching*, 7, 49-73.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80, (1, Whole No. 609). Retrieved from <http://www.psych.uncc.edu/pagoolka/LC.html>
- Soodak, L. C., & Podell, D. M. (1996). Teacher efficacy: Toward the understanding of a multifaceted construct. *Teaching and Teacher Education*, 12(4), 401-411.
- Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W.K.(1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, 68(2), 202-248.
- Tschannen-Moran, M., Woolfolk Hoy, A., (2001). Teacher efficacy: Capturing an elusive concept. *Teaching and Teacher Education*, 17, 783-805.

- U.S. Department of Education (2004). *No Child Left Behind: A toolkit for teachers*. Washington DC: U.S. Department of Education.
- Weiner, B. (1974). *Achievement motivation and attribution theory*. Morristown, N. J.: General Learning Press.
- Wertheim, C., & Leyser, Y. (2002). Efficacy beliefs, background variables, and differentiated instruction of Israeli prospective teachers. *The Journal of Educational Research*, 96(1), 54-63.
- Woolfolk, A. E., Rosoff, B., & Hoy, W. K. (1990). Teachers' sense of efficacy and their beliefs about managing students. *Teaching and Teacher Education*, 6, 137-148.

Figure 1

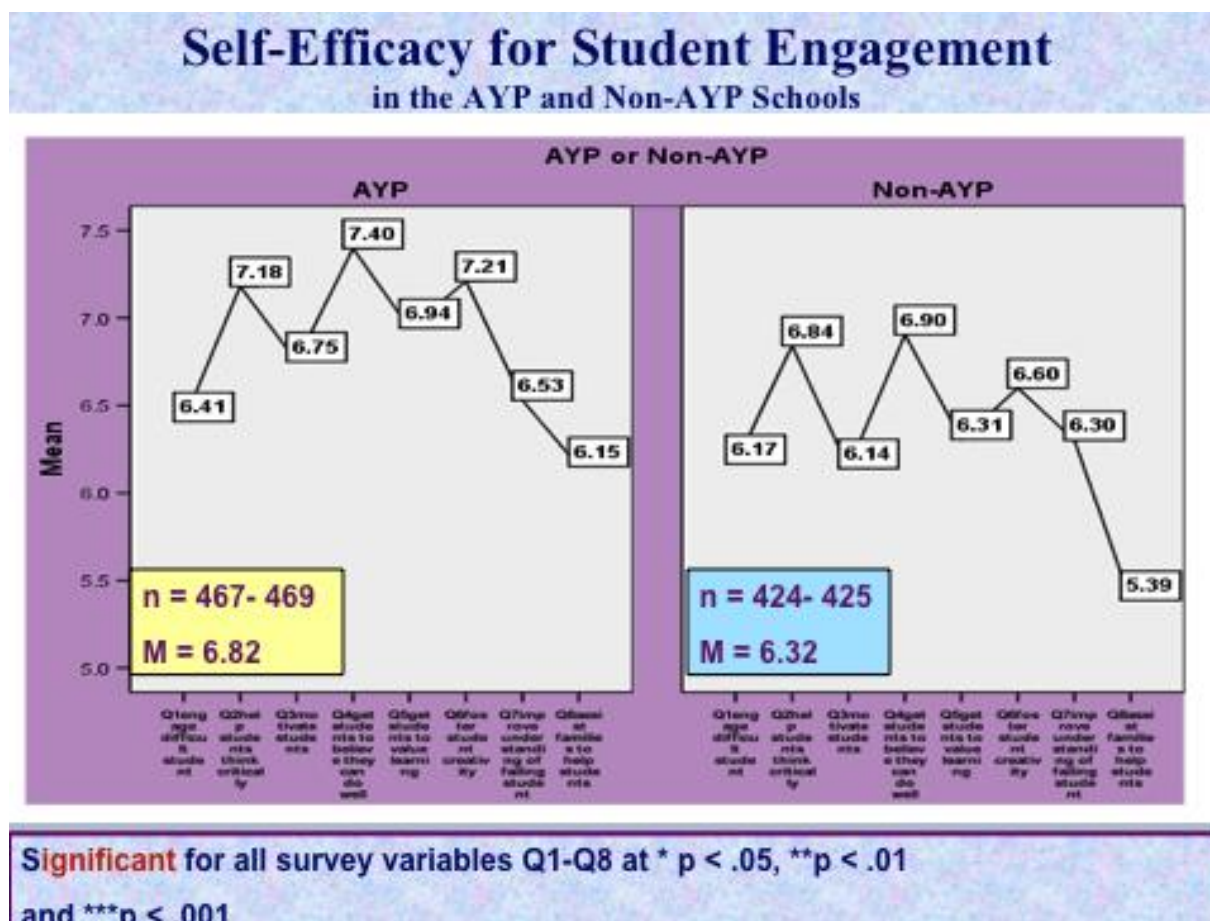


Figure 2

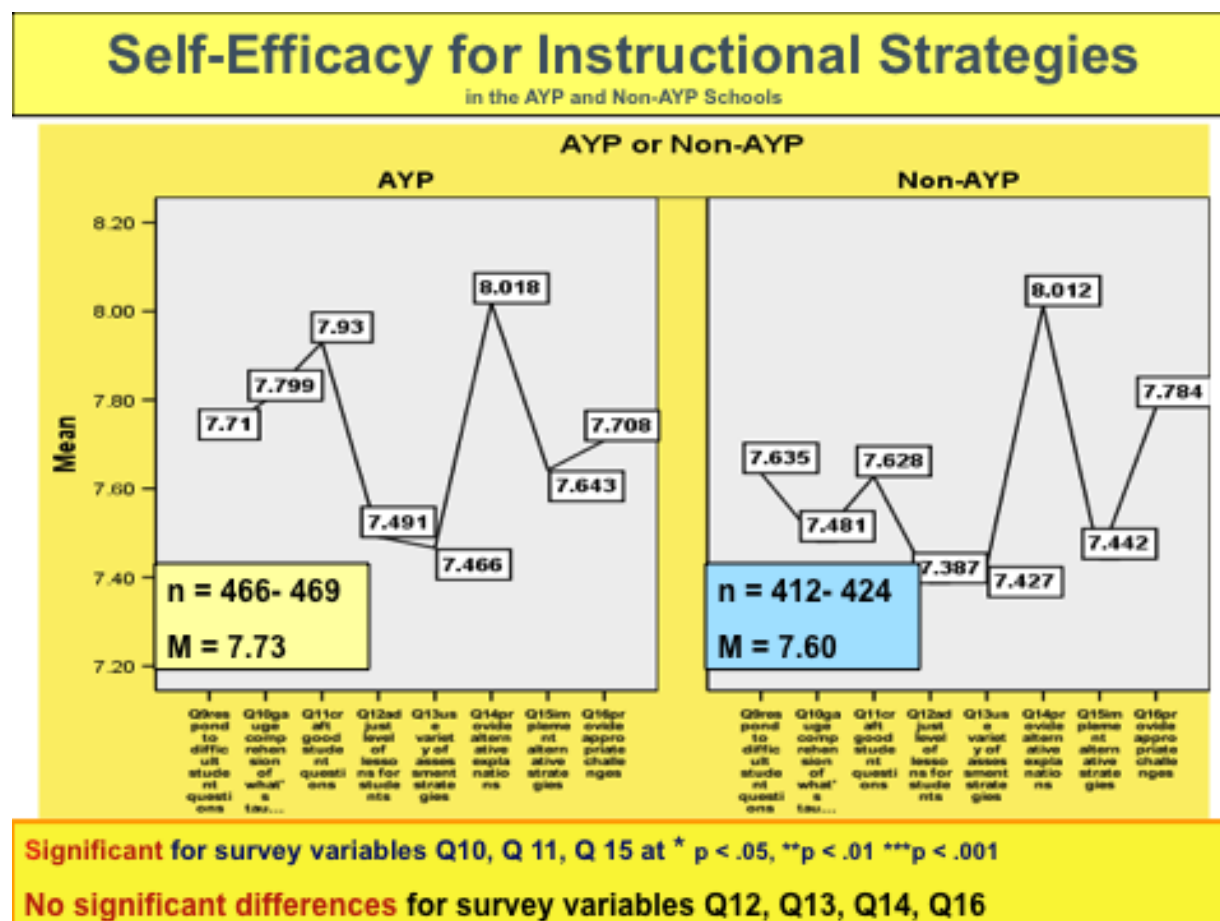
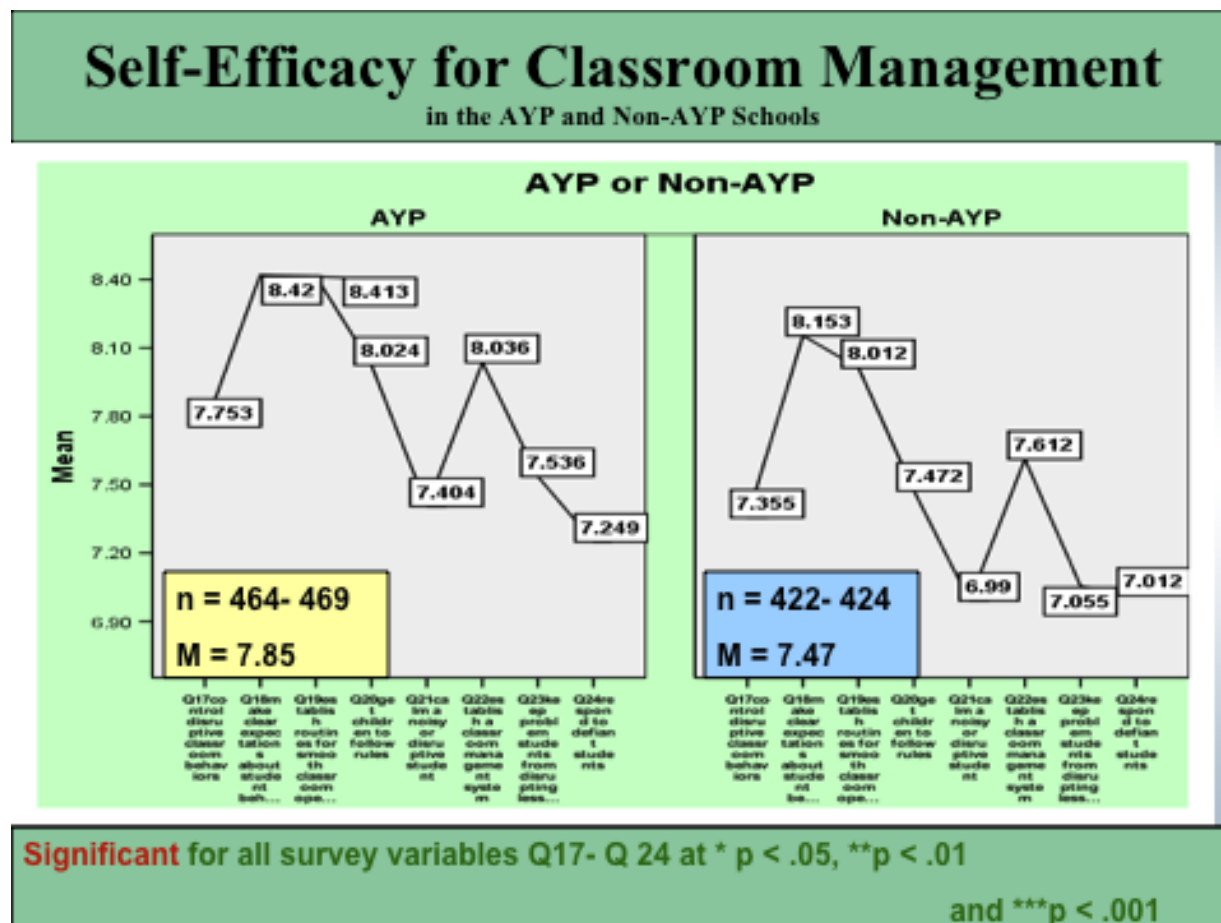


Figure 3



About the Authors:

Linda Bryant, Ed.D. is a retired principal and lead administrator for principals in the Pittsburgh Public Schools. Dr. Bryant has made presentations at numerous workshops on topics such as: The Learning Styles of Culturally Diverse Students; Characteristics of the Middle School Students; Peer Pressure; A Hands-On Approach to Teaching Science; and Using Data to Monitor Student Achievement.

Wenfán Yan, Ph.D. is Professor and Chair of the Department of Leadership in Education at the University of Massachusetts - Boston. His research interest have been been focused in the area of policy analysis around state, national, and international educational issues in equity, access, effectiveness, and assessment of P-16 education.

Online Education and Its Potential for Hiring: Perceptions from Principals and Superintendents

Mingyuan Zhang, Ed.D.
Central Michigan University
and
Larry Corbett, Ed.D.
Central Michigan University

The purpose of this study was to explore the perceptions of principals, superintendents, and hiring personnel regarding hiring candidates with or without online education experience.

Introduction

Online learning is one of the fastest growing trends in educational uses of technology (Means, Toyama, Murphy, Bakia, & Jones, 2009). According to Sloan Consortium's survey of 2,500 colleges nationwide in 2009, over 4.6 million students were taking at least one online course during the fall 2008 term, which is a 16.9 percent increase over the previous year (Allen & Seaman, 2009). In October 2006, the Western Governors University claimed in its website (www.wgu.edu) that its Teacher College had become the first and only online provider of teacher education to receive accreditation from the National Council for the Accreditation of Teacher Education (NCATE).

Meanwhile, the issue of teacher quality has once again risen to the top of the school reform agenda. The "highly qualified teacher" has become a buzzword and has been associated with a mandate for all states related to the NCLB federal law (Liu & Johnson, 2006). According to a report by the National Commission on Teaching and America's Future (Carroll & Foster, 2008), over the next four years, more than a third of the nation's 3.2 million teachers could retire, depriving classrooms of experienced instructors. This potential shortage of teachers poses significant challenges for schools and districts to recruit high quality teachers.

Although improving teacher qualifications is important, it is equally important to consider whether district hiring practices are effectively matching new teachers to schools and positions. Research suggests that public schools may not be hiring the best candidates (Ballou, 1996; Ballou & Podgursky, 1997, 1998; Therrien & Washburn-Moses, 2009). Approximately, 30% of new teachers leave the classroom within 3 years of entering the profession, and 40% to 50% leave within 5 years (Dolton & van der Klaauw, 1999; Huling-Austin, 1990; Ingersoll, 2002; Ingersoll & Smith, 2003; Murnane, Singer, Willett, Kemple, & Olsen, 1991). These high levels of attrition have serious consequences for schools and the students they serve.

As research indicates, schools may not always hire new teachers with high quality, good fit, and long-term commitment (Balter & Duncombe, 2008). On the other hand, teacher education programs at the university level are producing more and more graduates who have taken more online courses than ever before (Means, Toyama, Murphy, Bakia, & Jones, 2009). When these two trends intersect with each other, they pose a significant challenge for schools and districts,

particularly at a time when they are seeking to hire over a million new teachers in the course of a decade (Carroll & Foster, 2008).

The purpose of this study was to explore the general perceptions of principals, superintendents, and hiring personnel relating to hiring candidates with or without online education. Specifically, the present study explored the following questions:

1. What are the general perceptions of the principals, superintendents, and major hiring personnel on online education?
2. What are the respondents' perceptions on online teacher education?
3. What are the respondents' perceptions on hiring candidates with or without online education experience?
4. What are the respondents' perceptions on the future of online education?

Literature Review

In this literature review, we will focus primarily on two areas. One area is the need for high quality teachers and concerns related to hiring practices by K-12 administrative personnel. The other area is online education, the benefits it possesses and the challenges it faces.

Need for High Quality Teachers and Concerns of Hiring Practice

Decades of research on the determinants of student achievement make it clear that high quality teachers directly affect student success (Balter & Duncombe, 2008; Berry, Hoke, & Hirsch, 2004; Berry 2005; Ferguson, 1998; Goldhaber, 2002). With states under pressure to raise teacher quality to comply with NCLB and with a significant increase in demand for teachers projected for the next decade (Carroll & Foster, 2008), many school districts face significant teacher recruitment challenges. Most of the research on teacher labor markets has focused on how salaries and working conditions affect teacher location decisions. The policy debate has tended to focus on state-level policies for recruitment of new teacher candidates or recently employed teachers to work in hard-to-staff schools or fields (Ballou & Podgursky, 1998). Despite the concern that differences in school district hiring processes may contribute to the teacher quality problem (Loeb, 2000), the research documenting the use of particular hiring practices, as well as evaluating the effectiveness of these practices is very limited.

Loeb (2001) stated that "We know little about how effective districts are in their hiring decisions" (p. 99). Concerns over the quality of the public teacher hiring process have been raised in several comparisons of teacher recruitment policies in public and private schools (Ballou, 1996; Ballou and Podgursky, 1998). Ballou (1996) argued that "public school officials undervalue cognitive skills and subject matter knowledge when screening new applicants" (p. 130).

Most of the literature on recruitment in education examines teacher recruitment, training, and compensation policies in particular states, and uses these case studies to make broad recommendations (Clewell, Darke, Davis-Googe, Forcier, & Manes, 2000; Education Research Service, 2001; Fox & Certo, 1999; Hirsch, 2001; Pathways to Teaching Careers, 1997; The

Southeast Center for Teaching Quality, 2002). The majority of the research has focused on potential changes in state certification and compensation policy that can increase the supply of teachers. The little evidence that does exist on actual recruitment practices of school districts suggests that districts engage in a fairly limited search for candidates (Balter & Buncombe, 2008). This was also affirmed in the research findings by Gantner, Jenkins, and Layton (2006) on how school decision personnel recruited new teachers in Georgia.

In a nationwide study that spanned various fields, Adams and DeFleur (2005) found that applicants with traditional degrees were preferred by hiring committee chairs over applicants with degrees from virtual institutions or from degree programs that used mixed methods coursework.

According to Emley and Ebmeier (1997), the selection of staff members is one of the most important decisions made by an administrator. Indeed, no other single activity is as critical to operating an efficient and effective school. Errors made in the selection process have direct impact on the school and have far-reaching consequences for students, administrators, other teachers, and the functioning of the school as a whole. Common criticisms of hiring new teachers include lack of information gathering, poor judgment, and improper decision-making caused by drawing inferences from limited data obtained in artificial situations by untrained interviewers (Thayer, 1978). Clement (2000) created a guide which provided principals with useful information about hiring teachers, including checklists for organizing the search for qualified candidates, recommendations on how to identify suitable applicants, and sample interview questions.

Online Education: Benefits and Challenges

While online education is increasing at an unprecedented rate, quality control has become a major issue (Barbera, 2004; Chua & Lam, 2007). Casey (2008) stated that many educators view distance education with skepticism and express concerns about quality control. The opinion expressed by the experts was that online professional development courses would best serve the goal of increasing student achievement if they fit the requirements of both individuals and schools. Weaver (2006) discussed the challenges of online professional development including the changing nature of workshop participants, the need for ongoing personalized support for teaching staff members, the need for more strategic use of the staff development team in quality assurance and policy development, and the implementation of incentives to encourage quality in online teaching.

The benefits of taking online courses are obvious (Li & Irby, 2008). Accessibility is one of the most important ones (Coyner & McCann, 2004) since students can have access to all course-related materials including syllabi, assignments, lecture notes, PowerPoint presentations, and their grades at any time and place (Karber, 2004; Mupinga, 2005; Taylor, 2003). Students find the flexibility of time as the most important advantage since online courses allow students to engage in study that fits their available time and learning styles (Hammonds, 2003).

Challenges occur for both instructors and students regarding online courses. For the instructors, it takes a different paradigm to prepare, plan, and complete course information and materials

before the course could be offered online (Coyner & McCann, 2004). Reeves (2002) considered the transformation of a regular course to a web-based course as the greatest challenge faced by instructors. Such transformation might involve more people than the instructors in charge of the work. The instructors need guidance and specific help from informational technology (IT) personnel to add and modify materials to fit the online delivery (Lyons, 2004). While both instructors and students may struggle with the use of technology, it could become a more serious issue with students who might not have the adequate technical skills (Mupinga, 2005). The struggle could be exacerbated with slow Internet connection and lack of software programs on the computer.

Li and Irby (2008) indicated in their survey of literature that little has been done to compare the student attendance of online programs with traditional programs. One conclusion by Taylor (2003) is that online education is not for everyone. Students with low motivation and poor self-discipline may register for an online course and withdraw half way through the course. Lyons (2004) attributed this failure of completing the course to the online learning environment, student isolation, lack of face-to-face interaction with teachers and classmates, and difficulty getting personal assistance for both technical and academic issues.

Research Methods

In this section, we will explain the research methodology for the study. We will first introduce the sampling procedure and then explain the survey instrument used in this study.

Sample and Procedure

The survey was conducted in Michigan. The target population of the survey was administrators in the position of hiring new teachers. We identified and classified the administrators into three categories of K-12 public school administrators: (1) school district superintendents, (2) central office administrators with teacher employee hiring responsibilities, including assistant superintendents in personnel, assistant superintendents of human resource, human resource directors, or similar titles, (3) building principals with assignments including elementary, middle school or high school supervision.

A sample of superintendents, central office administrators with hiring responsibilities, and building principals were selected from the Intermediate School Districts portion of *The Michigan School Directory* using systematic sampling technique. Each of the 57 intermediate school districts has a website with a listing of the public schools they serve. There are approximately 550 public school districts listed on the 57 intermediate school district websites. Starting alphabetically with the intermediate school districts, every fifth school district was selected to receive a survey until 100 school districts were identified. The individual respondent within the identified school district was selected by a second level of systematic sampling through the three categories of district administrative positions. For example, a survey would be sent to the superintendent of the selected school district A; the next survey would be sent to the central office administrator position for school district B; and the next survey would be sent to the building principal for school district C. The categories would continue to rotate through the selected schools until all 100 identified school districts were matched with one of the three

administrator categories. Approximately one fifth of the total number of districts in Michigan were invited to participate in the survey. The number of districts chosen by the systematic sampling technique is a valid sample representative of the target population.

The total number of school administrators selected to receive the survey was 99 as a result of the second level of systemic sampling. However, after emailing the 99 original surveys, 7 of the emails bounced back to the sender and the surveys were never received by the identified public school administrator. It was noted that these administrators had left the school district for various reasons including advancement, moving to a different school district or retirement. Therefore, 92 of the 99 surveys sent were actually received by the identified school administrators. A follow-up email was sent two weeks later. Thirty-eight of 92 administration personnel completed the survey (41%).

Among the respondents were 20 superintendents, five assistant superintendents and executive directors, and 13 principals. Of the respondents, three were between 30 - 39 years old, seven between 40 - 49 years old, 20 between 50 - 59 years old, and eight 60 years or older. Thirty of the respondents were male and eight were female. Fifteen of the respondents have worked at the current positions for 1 - 5 years, ten 6 - 10 years, and seven 11 - 15 years. As for the level of formal education, 29 respondents had Master's degrees with some of them having extra graduate course work, 27 are currently pursuing doctoral degree, and two have doctoral degrees (See Appendix A for the demographic information).

Instruments

The instrument of the survey had 15 items. All items were based on a 1-5 Likert scale. The items were divided into four groups; each group was designed to collect data for one of the four research questions respectively. An expert review of the instrument was conducted resulting in items being added, deleted and modified. A small pilot study was conducted, resulting in further adjustment of the instrument. SurveyMonkey.com was chosen as the online platform for conducting the survey (see Appendix B for the survey).

Limitations

There are several limitations to this study that need to be addressed. The first limitation is the way the data were collected through voluntary participation. Therefore, despite a satisfactory 41% return rate, those who responded may share characteristics not typical of other school administrators; thus, possible bias related to the sample needs to be considered when examining the findings of this study. It also needs to be noted that a limited number of survey items (15) were used to explore the four research questions. Additional survey items may have uncovered additional findings for the four research questions. Another possible limitation is that the respondents may not have had extensive experience with potential teacher candidates who had online learning experience; therefore, the validity of the responses to the survey items may be also limited.

Results

The first part of the data analysis was to examine if the administrative positions, gender, age, years of employment in the position, and level of education would affect the respondents' perceptions of online education and potential hiring behaviors. A series of One-way ANOVAs were conducted through the SPSS by using administrative positions, gender, age, years of employment in the position, and level of education as independent variables and the results of the 15 survey items as dependent variables. The results of the statistical procedures indicated that there were no statistical significant differences in respondents' perceptions on the 15 survey items; and that the administrative positions, gender, age, years of employment in the position, and level of education did not affect the respondents' perceptions of online education and their potential hiring behaviors. Therefore, the following section will report the results of the descriptive analyses of the four major research questions by the respondents. Items for each research question will be grouped and reported together.

Research Question #1

What are the general perceptions of the principals, superintendents, and major hiring personnel about online education? To answer these questions, we designed four items for the surveys (Tables 2 & 3). The results are listed in the following tables:

Table 2. Survey Items 1 - 3

Survey Items 1-3	Strongly Agree	Agree	Disagree	Strongly Disagree	Undecided
1. Online learning can replace traditional learning	5.3% (2)	31.6% (12)	44.7% (17)	15.8% (6)	2.6% (1)
2. Online learning decreases the quality of teaching	2.6% (1)	36.8% (14)	36.8% (14)	5.3% (2)	18.4% (7)
3. Students lack a supporting learning environment in an online course	13.2% (5)	47.4% (18)	21% (8)	0% (0)	18.4% (7)

Table 3. Survey Item 4

Survey Item 4	Superior	Somewhat Superior	Same	Somewhat Inferior	Inferior
Compared to face-to-face learning, outcomes of online learning are	2.6% (1)	0% (0)	21.1% (8)	71% (27)	5.3% (2)

Four items were designed to find out the respondents' general perceptions on online education. The trends of the answers towards online learning are negative. Sixty percent of the respondents agree or strongly agree that online education cannot replace traditional education.

The respondents have a very low confidence in whether online education can create a supporting learning environment for its students as indicated by the result from Survey Item #1.

Interestingly, only 39% respondents strongly agree or agree that online learning decreases the quality of teaching.

Of the four questions, the respondents have a particularly low rating on online education's learning outcome. Seventy-six percent rate online education outcomes as somewhat inferior or inferior. This finding is much higher than the report by the Sloan Consortium (2006) where only about 40% of the respondents rated online education outcome as somewhat inferior or inferior.

Research Question #2

What are the respondents' perceptions on online teacher education? To answer this question, we designed four items for the survey (Tables 4 & 5). The results are listed in the following tables:

Table 4. Survey Items 5 - 7

Survey Items 5-7	Strongly Agree	Agree	Disagree	Strongly Disagree	Undecided
5. Compared to face-to-face learning, preservice teachers can learn necessary skills to become competent teachers	0% (0)	34.2% (13)	28.9% (11)	21.1% (8)	15.8% (6)
6. Online teacher education can create necessary learning environments	2.6% (1)	36.8% (14)	23.7% (9)	18.4% (7)	18.4% (7)
7. Online education will hinder preservice teachers from learning necessary teaching skills	2.6% (1)	39.5% (15)	36.8% (14)	5.3% (2)	15.8% (6)

Table 5. Survey Item 8

Survey Item 8	Superior	Somewhat Superior	Same	Somewhat Inferior	Inferior
Compared to a face-to-face education program, learning outcomes in full online teacher education programs are	0% (0)	0% (0)	26.3% (10)	55.3% (21)	18.4% (7)

Four questions were designed to find out the respondents' perceptions on online teacher education. The trends of the answers appear to be more negative than positive, which is similar to perceptions toward online education in general reflected in the results of the first research question. The respondents all tend to agree or strongly agree that students cannot learn necessary skills to become competent teachers through online education.

The respondents have very low ratings on the outcome of full time online teacher education programs where 74% choose "somewhat inferior" or "inferior." The negative perception of online teacher education is very similar to the negative perception by the respondents on the general online education. However, the respondents split on the survey questions 6 and 7 that

online teacher education can create necessary learning environments and online education will hinder preservice teachers from learning necessary teaching skills.

Research Question #3

What are the respondents' perceptions on hiring candidates with or without online education experience? To answer this question, we designed four items for the survey (Tables 6 & 7). The results are listed in the following tables:

Table 6. Survey Item 9

Survey Item 9	0% online courses	25% online courses	50% online courses	75% online courses	100% online courses
A best candidates for a teaching position is one with	10.5% (4)	81.6% (31)	5.3% (2)	2.6% (1)	0% (0)

Table 7. Survey Items 10 - 12

Survey Items 10-12	Strongly Agree	Agree	Disagree	Strongly Disagree	Undecided
10. I would consider hiring a candidate with an online education degree	0% (0)	18.4% (7)	26.3% (10)	42.1% (16)	13.2% (5)
11. Candidates with an online degree decrease my confidence in their teaching abilities	18.4% (7)	52.6% (20)	13.2% (5)	0% (0)	15.8% (6)
12. There is a hiring advantage to the candidate if he/she knows how to teach online courses	2.6% (1)	60.5% (23)	15.8% (6)	0% (0)	21.1% (8)

Four questions were designed to find out the respondents' perceptions of online teacher education. Of the respondents, 68% will not consider hiring candidates with an online education degree. However, 82% of the respondents agree that candidates with 25% of their courses taken online are more preferred than those candidates with no online learning experience or with too many courses taken online. The respondents (63%) acknowledge that it does bring candidates advantages if they know how to teach online courses. Interestingly, only 13% respondents believe that candidates with an online degree decrease their confidence in their teaching abilities.

Research Question #4

What are the respondents' perceptions on the future of online education? To answer these questions, we designed three items for the survey (Tables 8 & 9). The results are listed in the following tables:

Table 8. Survey Items 13 - 14

Survey Items 13-14	Strongly Agree	Agree	Disagree	Strongly Disagree	Undecided
13. Online education is critical to the long-term strategies of my school/school district	10.5% (4)	57.9% (22)	26.3% (10)	2.6% (1)	2.6% (1)
14. Hybrid courses (courses with a combination of face-to-face and online work) hold more promise than online courses	28.9% (11)	57.9% (22)	7.9% (3)	0% (0)	5.3% (2)

Table 9. Survey Item 15

Survey Item 15	Superior	Somewhat Superior	Same	Somewhat Inferior	Inferior
15. Compared to face-to-face learning, outcomes in online education in 3 to 5 years from now will be	0% (0)	18.4% (7)	47.4% (18)	28.9% (11)	5.3% (2)

The respondents obviously recognize the importance and inevitability of online education and 68% of the respondents agree or strongly agree that online education is critical to the long-term strategy of their school district. The respondents (87%) have a particular positive perception of hybrid courses, a format that combines both online and traditional modes of delivery.

However, the respondents have a prediction that 3 to 5 years from now, online education outcomes will be the same (47%) and somewhat inferior or inferior (34%). This prediction is not positive about the future of online education.

Discussion

The results of the survey were consistent with the expectation that there are concerns about the quality of online education in general and teacher education in particular among the K-12 hiring personnel. The majority of respondents do not believe that “online learning can replace traditional learning.” This low confidence concurs with the belief that compared to face-to-face learning, courses of online learning are inferior (76%).

The concerns regarding online education program seem to be legitimate due to the special characteristics of online learning environments and quality control. To better control online learning quality, the North American Council on Online Learning released a set of national online teaching standards in an effort to define high-quality virtual school teaching in 2008 (Trotter, 2008). These standards will allow policymakers to have some sort of independent review of online programs and give course providers a reference point for their own programs' quality. Such standards are also required in Michigan both for K-12 and college level online programs and coursework.

One major concern from the results is the respondents' negative rating on hiring candidates with online degrees. Respondents (68%) disagree or strongly disagree with the possibility of hiring candidates with online education degrees. This finding confirms the concern reported by Flowers and Baltzer (2006) that higher education institutes will not hire candidates with doctoral degrees earned online. Although a full online education degree decreases the hiring personnel's confidence as indicated by the survey Item 11, a certain degree of online experience, particularly, the ability to teach online courses is a plus for candidates. Of the respondents, 81% feel that 25% online courses for education major students are most preferred. Meanwhile, 63% of the respondents believe that candidates have advantages of being hired if they know how to teach online courses.

Sixty-five percent (65%) of the respondents feel that online education is critical to their school or school district's long-term strategy. The respondents believe that hybrid courses hold more promise than online courses, which also supports the findings by Cole and Kritzer (2009), Shin and Lee (2009) and Weil (2009). This finding indicates that K-12 administrators are aware of the importance and inevitability of online education and realize that it must become part of their long-term strategy.

Implications and Conclusions

The survey results indicate the following:

1. K-12 hiring administrators have low confidence in the outcomes of online learning.
2. K-12 hiring administrators believe that students lack a supporting learning environment in online learning
3. K-12 hiring administrators are split in their perception about whether online teacher education courses can create the necessary learning environment for training future teachers.
4. K-12 hiring administrators have low confidence in hiring candidates with online education degrees.
5. K-12 hiring administrators prefer to have candidates with 25% of their courses taken online.
6. K-12 hiring administrators believe online learning will be part of their school's long-term strategies.

The implication for teacher education programs is that given the high interest of the school administrators who will hire teacher candidates with 25% of the academic programs taken online, teacher education programs should seriously consider providing online courses. In addition to providing online learning experiences for their preservice students, teacher education programs should teach their students the methods for designing and delivering online courses.

The implication for school district hiring personnel is that K-12 administrators need to be educated to embrace online education and learn the techniques of online learning quality control; change their negative attitudes and beliefs regarding the role of online education for future teacher candidates; develop a better understanding of the advantages online education can provide in teacher education and professional development; and be educated to the concept that

online education and traditional education are both quality learning opportunities when the courses are developed and taught by high-quality instructors.

Online education, as a new means of learning, must continually be assessed as how to best provide the most conducive learning environment. Residential universities historically dismiss online education, but as society becomes more high tech, the option of pursuing an education outside a traditional university has been gaining popularity. Residential universities, particularly teacher education programs, need to change teaching faculty's perception of online education. Residential universities need to invest in its faculty's professional development to prepare them for online course designing and teaching. The university faculty must continue to learn and implement the best practice for online teaching.

Appendix A. Demographic Information

Questions on Demographic Information	n	%
1. What is your current position of employment?		
Superintendent	20	(53%)
Assistant Superintendent	5	(13%)
Principal	13	(34%)
2. Please identify your gender.		
Female	8	(21%)
Male	30	(79%)
3. Please identify your age range.		
Under 25	0	(0%)
25 - 29	0	(0%)
30 - 39	3	(8%)
40 - 49	7	(18%)
50 - 59	20	(53%)
60 or older	8	(21%)
4. Number of years employed in your current position.		
1 - 5 years	15	(40%)
6 - 10 years	10	(26%)
11 - 15 years	7	(18%)
16 - 20 years	4	(10%)
21 - 25 years	0	(0%)
26 - 30 years	0	(0%)
over 30 years	2	(6%)
5. What is the highest level of formal education you have completed?		
Bachelor's degree	0	(0%)
Bachelor's degree + graduate coursework	0	(0%)
Master's degree	2	(5%)
Master's degree + graduate coursework	27	(71%)
In Doctoral program	8	(21%)
Doctoral degree	1	(3%)

Note: N=38

Appendix B. Survey Questions

Questions on Demographic Information

1. What is your current position of employment?
 - Superintendent
 - Assistant Superintendent
 - Principal
2. Please identify your gender.
 - Female Male
3. Please identify your age range.
 - Under 25
 - 25 - 29
 - 30 - 39
 - 40 - 49
 - 50 - 59
 - 60 or older
4. Please identify the range of years you will be employed in your current position at the end of this current academic year.
 - 1 - 5 years
 - 6 - 10 years
 - 11 - 15 years
 - 16 - 20 years
 - 21 - 25 years
 - 26 - 30 years
 - over 30 years
5. What is the highest level of formal education you have completed?
 - Bachelor's degree
 - Bachelor's degree + graduate coursework
 - Master's degree
 - Master's degree + graduate coursework
 - In Doctoral program
 - Doctoral degree

Questions on Online Education

1. Online learning can replace traditional learning
Strongly Agree Agree Disagree Strongly Disagree Undecided
2. Online learning decreases the quality of teaching
Strongly Agree Agree Disagree Strongly Disagree Undecided
3. Students lack a supporting learning environment in an online course
Strongly Agree Agree Disagree Strongly Disagree Undecided
4. Compared to face-to-face learning, outcomes of online learning are
Superior Somewhat Superior Same Somewhat Inferior Inferior
5. Compared to face-to-face learning, preservice teachers can learn necessary skills to become competent teachers
Strongly Agree Agree Disagree Strongly Disagree Undecided
6. Online teacher education can create necessary learning environments
Strongly Agree Agree Disagree Strongly Disagree Undecided
7. Online education will hinder preservice teachers from learning necessary teaching skills
Strongly Agree Agree Disagree Strongly Disagree Undecided
8. Compared to a face-to-face education program, learning outcomes in full online teacher education programs are
Superior Somewhat Superior Same Somewhat Inferior Inferior
9. Best candidates for a teaching position is one with
0% online courses 25% online courses 50% online courses
75% online courses 100% online courses
10. I would consider hiring a candidate with an online education degree
Strongly Agree Agree Disagree Strongly Disagree Undecided
11. Candidates with an online degree decrease my confidence in their teaching abilities
Strongly Agree Agree Disagree Strongly Disagree Undecided
12. There is a hiring advantage to the candidate if he/she knows how to teach online courses
Strongly Agree Agree Disagree Strongly Disagree Undecided
13. Online education is critical to the long-term strategy of my school/school district
Strongly Agree Agree Disagree Strongly Disagree Undecided
14. Hybrid courses (a course with a combination of face-to-face and online work) hold more promise than online courses
Strongly Agree Agree Disagree Strongly Disagree Undecided
15. Compared to face-to-face learning, outcomes in online education in 3 to 5 years from now will be
Superior Somewhat Superior Same Somewhat Inferior Inferior

References

- Adams, J., & DeFleur, M. H. (2005). The acceptability of a doctoral degree earned online as a credential for obtaining a Faculty Position. *American Journal of Distance Education*, 19(2), 71-85.
- Allen, I. E., & Seaman, J. (2009). Learning on demand online education in the United States, 2009, Sloan-C, Needham, MA. <http://www.sloan-c.org/publications/survey/pdf/learningondemand.pdf>
- Ballou, D. (1996). Do public schools hire the best applicants? *Quarterly Journal of Economics*, 111(1), 97-133.
- Ballou, D., & Podgursky, M. (1997). *Teacher pay and teacher quality*. Kalamazoo, MI: W. E. Upjohn Institute for Employment Research.
- Ballou, D., & Podgursky, M. (1998). Teacher recruitment and retention in public and private schools. *Journal of Policy Analysis and Management*, 17(3), 393-417.
- Balter, D., & Duncombe, W. (2008). Recruiting highly qualified teachers: Do district recruitment practices matter? *Public Finance Review*, 20, 36-62.
- Barbera, E. (2004). Quality in virtual education environments. *British Journal of Educational Technology*, 35(1), 13-20.
- Berry, B. (2005). Recruiting and retaining board-certified teachers for hard-to-staff schools. *Phi Delta Kappan*, 87(4), 290-7.
- Berry, B., Hoke, M., & Hirsch, E. (2004). The search for highly qualified teachers. *Phi Delta Kappan*, 85(9), 684-9.
- Casey, D. M. (2008). A journey to legitimacy: The historical development of distance Education through Technology. *TechTrends*, 52(2), 45-51.
- Carroll, T., & Foster, E. (2008). Learning teams: Creating what's next. Retrieved from <http://www.nctaf.org/documents/NCTAFLearningTeams408REG2.pdf>
- Chua, A., & Lam, W. (2007). Quality assurance in online education: The Universitas 21 Global approach. *British Journal of Educational Technology*, 38(1), 133-52.
- Clement, M C. (2000). *Essentials for principals: How to interview, hire, and retain high-quality new teachers*. Alexandria, VA: National Association of Elementary School Principals (NAESP). (ERIC Document Reproduction Service No. ED450461)
- Clewell, B., Darke, K., Davis-Google, T., Forcier, L., & Manes, S. (2000). *Literature review on teacher recruitment programs*. Washington D.C.: The Urban Institute.
- Cole, J. E., & Kritzer, J. B. (2009). Strategies for success: Teaching an online Course. *Rural Special Education Quarterly*, 28(4), 36-40.
- Coyner, S. C., & McCann, P. L. (2004). Advantages and challenges of teaching in an electronic environment: The accommodate model. *International Journal of Instructional Media*, 31(3), 223-8.
- Dolton, P., & van der Klaauw, W. (1999). The turnover of teachers: A competing risks explanation. *Review of Economics and Statistics*, 81(3), 543-552.
- Education Research Service. (2001). Finding and keeping high-quality teachers. *The Informed Educator Series*, pp. 1-12.
- Emley, K., & Ebmeier, H. (1997). The effect of employment interview format on principals' evaluations of teachers, *Journal of Personnel Evaluation in Education*, 11, 39-56.

- Ferguson, R. (1998). Can schools narrow the black-white test score gap? In C. Jencks, & M. Philips (Eds.), *The Blackwhite test score gap*, (pp. 318-374). Washington, DC: Brookings Institution.
- Flowers, J. C., & Baltzer, H. (2006). Hiring technical education faculty: Vacancies, criteria, and attitudes toward online doctoral degrees. *Journal of Industrial Teacher Education*, 43(3), 29-44.
- Fox, J., & Certo, J. (1999). *Recruiting and retaining teachers: A review of the literature*. Richmond, VA: Metropolitan Educational Research Consortium.
- Gantner, M. W., Jenkins, D. B., & Layton, K. (2006). Decision-makers' perceptions of hiring teachers certified through alternative pathways in Georgia. *Georgia Educational Researcher*, 4(1). Retrieved from http://coefaculty.valdosta.edu/lshmert/gera/vol__4_no__1.htm
- Goldhaber, D. (2002). The mystery of good teaching. *Education Next*, 2(1), 50-55.
- Hirsch, R. (2001). *Teacher recruitment: Staffing classrooms with quality teachers*. Denver, CO: National Conference of State Legislatures.
- Huling-Austin, L. (1990). Teacher induction programs and internships. In W. R. Houston (Ed.), *Handbook of research on teacher education* (pp. 535-548). New York: Macmillan.
- Ingersoll, R. (2002). The teacher shortage: A case of wrong diagnosis and wrong prescription. *NASSP Bulletin*, 86, 16-31.
- Ingersoll, R., & Smith, T. (2003). The wrong solution to the teacher shortage. *Educational Leadership*, 60(8), 30-33.
- Li, C. S., & Irby, B. (2008). An overview of online education: Attractiveness, benefits, challenges, concerns and recommendations. *College Student Journal*, 42(2), 449-58.
- Liu, E., & Johnson, S. M. (2006). New teachers' experiences of hiring: Late, rushed, and information-poor. *Educational Administration Quarterly*, 42(3), 324-60.
- Loeb, S. (2000). How teachers' choices affect what a dollar can buy: Wages and quality in K-12 schooling. Proceedings from the Symposium on the Teaching Workforce. Albany, NY: Education Finance Research Consortium.
- Loeb, S. (2001). Teacher quality: Its enhancement and potential for improving student achievement. In P. Monk, H. Walberg, and M. Wang (Eds.), *Improving Educational Productivity* (pp. 99-114). Greenwich, CT: Information Age Publishing.
- Lyons, J. F. (2004). Teaching U.S. history online: Problems and prospects. *The History Teacher*, 37(4), 447-56.
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies*. Retrieved from <http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>
- Mupinga, D. M. (2005). Distance education in high schools: Benefits, challenges, and suggestions. *The Clearing House*, 78(3), 105-8.
- Murnane, R. J., Singer, J. D., Willett, J. B., Kemple, J. J., & Olsen, R. J. (1991). *Who will teach? Policies that matter*. Cambridge, MA: Harvard University Press.
- Pathways to Teaching Careers. (1997). *Recruiting, preparing and retaining teachers for America's schools*. Pleasantville, NY: DeWitt Wallace/Reader's Digest Fund.
- Reeves, T. C. (2002). Keys to successful E-learning: Outcomes, assessment and evaluation. *Educational Technology*, 42(6), 23-9.

- Shin, M., & Lee, Y.-J. (2009). Changing the landscape of teacher education via online teaching and learning. *Techniques (Association for Career and Technical Education)*, 83(9), 32-3.
- Southeast Center for Teacher Quality. (2002). *Recruiting teachers for hard-to-staff schools*. Chapel Hill, NC: The University of North Carolina.
- Thayer, C. W. (1978). Project empathy: An alternative way to hire teachers. *North Central Association Quarterly*, 52, 438-442.
- Therrien, W. & Washburn-Moses, L. (2009). Impact of No Child Left Behind's highly qualified requirements on both rural and non-rural schools in Ohio. *Rural Special Education Quarterly*, 28(1), 11-19.
- Taylor, P. G. (2003). On-campus and online in Australia: Issues emerging from this convergence of technologies. *Educational Technology*, 43(3), 45-54.
- Trotter, A. (2008). Voluntary online-teaching standards come amid concerns over quality. *Education Week*, 27(26), 1, 15.
- Weaver, D. (2006). The challenges facing staff development in promoting quality online teaching. *International Journal on E-Learning*, 5(2), 275-286.
- Weil, M. (2009). The blended classroom revolution. *Technology & Learning*, 29(8), 28, 30-2.

About the Authors:

Mingyuan Zhang, Ed.D. is an associate professor in the Department of Teacher Education and Professional Development at the Central Michigan University. He teaches courses in educational technology, learning theories, and educational measurement.

Larry Corbett, Ed.D. is an associate professor and Chair of the Department of Teacher Education and Professional Development at the Central Michigan University. He served as Director of Student Teaching for the Department for many years, which provided him many opportunities to work with PreK-12 administrators throughout the Great Lakes Region.