A Correlational Study of Teacher Efficacy and Culturally Responsive Teaching Techniques in a Southeastern Urban School District

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CONTEXT

This study was conducted in the fall of 2015 in a large, urban school district located in the mid-Atlantic region of the United States. There are 33 elementary schools, one kindergarten through eighth grade school, eight middle schools, and five high schools in the district; three of the five high schools in the district participated.

The district was the focus of national attention in the late 1950s for spearheading racial desegregation of its schools; the district garnered national attention again in 1986 when a judicial ruling allowed them to end busing and achieve racial balance in its schools. Mandatory busing for the purpose of desegregation in the district began in 1971. Within the first weeks of busing, 8,000 students left the district (most of whom were Caucasian). In 1983, the school board voted to end cross-town busing of elementary students. Their decision was upheld in 1986 when the U.S. Supreme Court refused to review the lower court decision. A community oversight committee was established to oversee equality among schools in the district, but it disbanded itself in 1991. Currently, the school district has a population of 238,832; it enrolls a racially and economically diverse population of approximately 32,000 total students supported by a staff of more than 4,600 employees.

Students classified as economically disadvantaged make up nearly 67% of the district's student body; African-American students are a majority of the district's economically disadvantaged population of students. Nationally and across the state, students who are economically disadvantaged tend to have lower performance on EOC tests due to a variety of factors that influence readiness to learn; this district follows the same trend. District-wide, students who are not economically disadvantaged tend to exceed state standards on EOC tests. The primary objective of this study was to examine how teacher efficacy impacts culturally responsive teaching techniques (CRTTs), instructional strategies, student engagement, and classroom management. In addition, personal teacher efficacy (PTE) and general teacher

efficacy (GTE) of high school teachers in three of the five district high schools was examined. This study sought to address four research questions:

1. What is the PTE and GTE of high school teachers as measured by the Teacher Efficacy Scale (TES)?

2. What is the relationship between teacher efficacy and CRTTs as measured by the TES and the CRTT Scale?

3. What is the relationship between teacher efficacy and student engagement in high school classrooms as measured by the Teacher Sense of Efficacy Scale (TSES), CRTT Scale, and TES?

4. What is the relationship between teacher efficacy, CRTTs, instructional strategies, student engagement, and classroom management as measured by the TES, TSES, and CRTT Scale?

RELATED LITERATURE

Prior research has identified important relationships between teacher efficacy and a teacher's ability to take into account students' prior experiences, community settings, cultural backgrounds, and ethnic identities (Banks, 2010; Edwards, 2014; Gay, 2010; Glickman et al., 2014; Sanacore, 2004). In addition to a strong sense of teacher efficacy, a teacher should also have confidence in his/her ability to create a dynamic, culturally complex learning environment (Paris & Ball, 2009; Villegas & Lucas, 2002).

Teacher Efficacy

Personal and general efficacy were examined separately in an effort to better understand the efficacy levels of the teachers in the study. Previous research has shown that teachers with a strong sense of efficacy are more persistent and resilient when things do not go smoothly, tend to set attainable goals for students, are less afraid of student conflict, and are

more likely to take greater intellectual and interpersonal risks in the classroom (Moseley & Utley, 2006; Protheroe, 2008; Silverman & Davis, 2009; Vesely et al., 2013).

Cultural Teaching

Teachers possess lifelong experiences that result in beliefs and perceptions which influence their teaching efficacy (Gallavan, 2007). Previous research has found a connection between teachers' sense of efficacy, culturally responsive pedagogy, and student achievement (Oyerinde 2008; Tschannen-Moran & Woolfolk Hoy, 2001; Tucker et al., 2005). No significant relationship was found to exist between GTE and culturally responsive teaching in this study; however, a positive statistically significant relationship was discovered between culturally responsive teaching and PTE. A teacher who has a strong sense of cultural efficacy has confidence in his/her ability to assist all students in the process of generating meaning in response to new ideas and experiences they encounter in the classroom (Edwards, 2014; Ladson-Billings, 2009; Villegas & Lucas, 2002).

Student Engagement

Because cultural teaching was identified as a subscale of teacher efficacy during principle components analysis (PCA) in this study, the construct was combined with GTE and PTE and then analyzed to determine the relationship between teacher efficacy, cultural teaching, and student engagement. Positive, statistically significant relationships were discovered between teacher efficacy (personal and general), cultural teaching, and student engagement. Research confirms student engagement improves when teachers are confident in their ability to include relevant, personalized, culturally connected learning experiences into their classroom instruction (Edwards, 2014; Gay, 2010; Ladson-Billings, 2009; Oyerinde, 2008).

Instructional Strategies and Classroom Management

Statistically significant relationships were discovered between PTE and each of the four remaining constructs (cultural teaching, instructional strategies, student engagement, and classroom management). Numerous studies suggest a relationship between elevated levels of personal efficacy and the use of instructional strategies that are relevant and intellectually rigorous for students (Moseley & Utley, 2006; Oyerinde, 2008; Protheroe, 2008; Vesely et al., 2013). When students are given opportunities to explore topics of interest to them, they engage more readily in classroom activities; the classroom then becomes a self-managing, culturally complex, dynamic learning community (Gay, 2010; Ladson-Billings, 2009; Paris & Ball, 2009).

A positive, slight to moderate, statistically significant relationship was also found to exist between classroom management, GTE, PTE, instructional strategies, and student engagement; a slight relationship was found between classroom management and cultural teaching, but it was not significant. Instructional strategies and student engagement exhibited the strongest relationships with classroom management.

According to research, the goal of classroom management is to create an environment in which teachers provide all students with equitable opportunities for learning (Weinstein et al., 2003). The most effective way to accomplish that goal is to use relevant, personalized, collaborative, and connected strategies that provide engagement opportunities for all students (Edwards, 2014). The positive, moderate, statistically significant relationship between classroom management and instructional strategies demonstrates teachers' beliefs in their abilities to use strategies that create equitable learning opportunities for their students.

Moderate statistically significant relationships were discovered to exist between instructional strategies, GTE, PTE, cultural teaching, and student engagement. In order to ensure that students engage intently in their learning, teachers should consider student culture, motivation, enjoyment, and curiosity when planning classroom activities (Ladson-Billings, 2009; Loveless, 2015; Richards, Brown, & Ford, 2007). According to Ladson-Billings (2000), when teachers

combine high efficacy levels with the use of effective, culturally sensitive instructional strategies, student engagement increases dramatically.

METHODS

Participants

Participants for this study (n=69) consisted of high school teachers at three of the five high schools in the same Southeastern urban school district. The schools were selected based on convenience and availability.

Instruments

This study used surveys to investigate the relationship between teacher efficacy, culturally relevant teaching techniques, classroom management, student engagement, and instructional strategies.

The Teacher Sense of Efficacy Scale (TSES) developed and validated by Tschannen-Moran and Woolfolk Hoy (2001) was used to measure three dimensions of efficacy: instructional strategies, student engagement, and classroom management. Tschannen-Moran and Woolfolk Hoy (2001) believed those three dimensions "represent the richness of teachers' work lives and the requirements of good teaching" (p. 801). The instrument has a unified and stable factor structure and assesses a broad range of teacher capabilities without being specific enough to render it useless for comparisons across contexts, levels, and subjects (Tschannen-Moran & Woolfolk Hoy, 2001). The reliability for Tschannen-Moran and Woolfolk Hoy's 24-item TSES is 0.94, indicating that

it is a very reliable measure of teacher efficacy.

Woolfolk and Hoy's (1990) Teacher Efficacy Scale (TES), based on Gibson and Dembo's (1984) original Teacher Efficacy Scale, was used to measure personal teacher efficacy (PTE)

and general teacher efficacy (GTE). The original Gibson and Dembo 30-item scale has a 0.78 for the first factor, PTE, and 0.75 for the second factor, GTE, which shows a reasonable measure of reliability for PTE and GTE. The Woolfolk and Hoy (1990) 22-item scale used in this study has a 0.82 for the first factor, PTE, (a good measure of reliability) and 0.74 (a reasonable measure of reliability) for the second

factor, GTE.

Culturally responsive teaching was measured using the Culturally Responsive Teaching Techniques Scale (CRTTS) developed by Oyerinde in 2008. The CRTT Scale was developed to address gaps in existing teacher efficacy instruments; "specifically, none of the instruments take into account the culturally responsive teaching techniques dimension of teacher efficacy" (p. 54). The CRTT Scale measured the extent to which teachers are incorporating Culturally Responsive Teaching Techniques (CRTTs) into their pedagogy. The alpha for Oyerinde's CRTT Scale is 0.754, which is a reasonable measure of reliability for this instrument. The TSES and CRTT Scale were combined in this study to provide more information concerning teacher efficacy. To establish validity, Oyerinde (2008) used a combination of confirmatory and exploratory factor Analysis on the combined scales; he used confirmatory factor analysis to confirm the inclusion of CRTTs with teacher efficacy. He used exploratory factor analysis to explore the possibility of discovering a new factor not currently measured in the TSES.

Data Collection

Data collection consisted of the on-line and in-person completion of the TSES, TES, and CRTT Scale, which took approximately 10-15 minutes. Teachers were asked to respond to the TES survey using a Likert-type scale with responses of Strongly Disagree, Moderately Disagree, Disagree Slightly, Agree Slightly, Moderately Agree, and Strongly Agree. The TSES and CRTT Scale are also Likert-type scales; however, teachers were asked to respond by selecting one of the following for each item: Nothing, Very Little, Some, Quite a Bit, and a Great

Deal. The TSES and CRTT Scale were combined to assess efficacy for four factors of the teacher efficacy construct: classroom management, student engagement, CRTTs, and instructional strategies. Survey data were collected from 84 of the possible 320 participants in three high schools; 69 of those responses were valid.

Data Analysis

Data analysis commenced with a report on the response rate from teachers. A convenience sample was used in this study because the respondents were "chosen based on their convenience and availability" (Creswell, 2014, p. 158). The findings from the data collected in this study were used for the purpose of elaborating on the otherwise undetected nuances, themes, and patterns of the teachers who participated in the study (Rea & Parker, 2014). Data from the CRTT Scale presented demographic information on teachers' gender, ethnicity, and teaching experience.

The TSES and CRTT Scale scores were calculated based on teacher responses to individual questions on each survey. For the TSES, there were 18 questions divided into three sections of questions for each of the three constructs: classroom management, instructional strategies, and student engagement. According to the scale, each of the questions had a Likert-type scale response and each response was assigned a numerical value range. *Nothing* was assigned one to two points; *Very Little*, three to four points; *Some Influence*, five to six points; *Quite a Bit,* seven to eight points; and *a Great Deal* was assigned nine points. There were three questions for the construct of cultural teaching; those questions also had a Likert-type scale which assigned a numerical value to responses. *Nothing* was assigned one point; *Very Little,* two points; *some,* three points; *Quite a Bit,* four points; and *A Great Deal*, five points. Additionally, each of the four constructs were calculated separately and entered into SPSS under its respective category. Each teacher had a total calculated score for culturally responsive

teaching, classroom management, instructional strategies, and student engagement. Those scores were entered into SPSS under their respective categories and produced the overall and individual school mean, standard deviation, and number of cases for each construct from the combined TSES and CRTT Scale.

GTE and PTE were examined separately to determine overall and individual school levels for participants in the study. Personal efficacy items were reversed for analysis in this study so that 6="Strongly Agree," thereby indicating very high PTE. For the purposes of analysis, the closer the mean score is to 6, the higher the level personal efficacy of respondents. General efficacy items were based on levels of disagreement with items on the scale. The general efficacy item scores do not require reversal to indicate a strong sense of efficacy with a high score; a strong sense of efficacy is indicated by the disagreement with the statements on the scale.

Using SPSS, correlational analysis was used to determine the strength and direction of relationships between GTE, PTE, CRTTs, Instructional strategies, Student engagement, and classroom management (Creswell, 2015). In addition, scatter plot graphs and correlation matrices were created for the TSES/CRTT and TES Scales.

RESULTS

In order to address the generalizability of the findings in this study, participant gender data were analyzed. There were 69 valid responses to the demographic portion of the surveys. Of the 69 total respondents, 75.8% were female and 24.2% were male; two respondents chose to skip this question on the survey. Overall district faculty gender distribution data were not available for comparison at the time of this study; however, the national percentage of female public school teachers is 76% (U.S. Department of Education, 2015). Table 1 shows the distribution of teachers by gender from each of the three high schools that participated in the study.

Table 1

Distribution of Teacher Participants in the three High Schools by Gender

Gender

	Male % (Valid %)	Female % (Valid %)	N	Missing (%)
Madison H.S.	26.1 (27.3)	69.6 (72.7)	21	1 (4.3)
Allinon H.S.	11.1 (11.8)	83.3 (88.2)	17	1 (5.6)
Callahan H.S.	25.0 (25.0)	75.0 (75.0)	28	0
Total	21.7 (22.4)	75.4 (77.6)	67	2 (2.9)

The total distribution of female participants (75.8%) mirrors the national average of female teachers in classrooms across the U.S. (76%).

In the context of this study, PTE relates to a teacher's feeling of confidence in their personal teaching abilities (Hoy, 2000). The scale used to measure this construct was Woolfolk and Hoy's (1990) TES, which scores personal efficacy based on levels of agreement with items on the scale. Personal efficacy items were reversed for analysis in this study so that 6="Strongly Agree," thereby indicating very high PTE. For the purposes of analysis, the closer the mean score is to 6, the higher the level personal efficacy of respondents. Table 2 contains the overall and individual school PTE mean scores.

Table 2

PTE Scores Overall and by School

	Overall	Allinon H.S.	Madison H.S.	Callahan H.S.
Mean	4.57	4.35	4.69	4.61
Standard Deviation	1.089	1.153	1.003	1.073
Range	5	5	5	5

The overall PTE mean score for all three high schools involved in the study was 4.57; the highest possible score was 6. All of the scores exhibited no less than 75% agreement with statements that are consistent with teachers who possess a strong sense of personal efficacy.

In this study, GTE relates to a teacher's general belief about the power of teaching to reach at-risk children (Hoy, 2000). Woolfolk and Hoy's (1990) TES was also employed to measure this construct. General efficacy items were based on levels of disagreement with items on the scale. The general efficacy item scores do not require reversal to indicate a strong sense of efficacy with a high score. For the purposes of analysis, the closer the mean score is to 6, the higher the level of GTE of respondents. Table 3 shows the overall and individual school GTE mean scores.

Table 3

GTE Scores Overall and by School

	Overall	Allinon H.S.	Madison H.S.	Callahan H.S.
Mean	3.49	3.27	3.47	3.64
Standard Deviation	1.579	1.256	1.195	1.268
Range	5	5	5	5

The overall GTE mean score for the three high schools involved in the study was 3.86; the highest possible score was 6. The scores ranged from 54% to 61% disagreement, which indicates a slightly low sense of GTE. Because PTE and GTE are independent constructs, it is possible for a teacher to have confidence in his or her personal teaching ability while lacking faith in the general ability of teachers to reach at-risk children (Protheroe, 2008).

Responses to the combined 29- item CRTT Scale and TSES were analyzed using Principal Component Analysis (PCA). During that analysis four independent dimensions of teacher efficacy were indicated: classroom management, instructional strategies, student engagement, and CRTTs. The PCA also included the TES; two independent dimensions of teacher efficacy were identified: *general* and *personal.* The final research question guiding this study examined the relationship between all of the variables. Table 4 contains the Spearman's correlation coefficient values (rs) for each of the six variables.

Table 4

Spearman's Correlation GTE, PTE, CRTTs, Instructional Strategies, Student Engagement, and Classroom Management

	General Efficacy	Personal Efficacy	Cultural Teaching	Instructional Strategies	Student Engagement	Classroom Management
General Efficacy	1.00	.152	.119	.235	.398**	.367**
Personal Efficacy		1.00	.266*	.331**	.373**	.311**
Cultural Teaching			1.00	.368**	.319**	.214
Instructional Strategies				1.00	.371**	.467**
Student Engagement					1.00	.439**
Classroom Management						1.00

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4 highlights several moderate, positive, statistically significant relationships:

- Instructional strategies and classroom management, *rs* (67)=. 467, *p*<. 01.

- Student engagement moderately correlates with classroom management, *rs* (67)=. 439, *p*<. 01.

Several other variables moderately correlated with one another. For example:

- General efficacy had a moderately statistically significant correlation with student engagement, *rs* (67)=. 398, *p*<. 01.

- Personal efficacy had a statistically significant correlation with student engagement; this correlation was moderate in strength, *rs* (67)=. 373, *p*<. 01.

Other moderate correlations that were statistically significant include:

- Instructional strategies and student engagement, *rs* (67)=. 371, *p*<. 01

- Cultural teaching and instructional strategies, *rs* (67)=. 368, *p*<. 01

There were a few correlations that were statistically significant, positive, and slight in strength; they included:

- Personal efficacy and instructional strategies, *rs* (67)=. 331, *p*<. 01

- Student engagement and cultural teaching, *rs* (67)=. 319, *p*<. 01

- PTE and classroom management, *rs* (67)=. 311, *p*<. 01

There was also a slight statistically significant correlation between personal efficacy and cultural teaching. Based on the findings, there is a slight to moderate statistically significant relationship between teacher efficacy, CRTTs, instructional strategies, student engagement, and classroom management.

DISCUSSION

Teacher Efficacy

The TES analysis of teacher responses examined personal and general efficacy separately in an effort to better understand the efficacy levels of the teachers in the study. The first research question guiding this study investigated general   (GTE) and personal (PTE) teacher efficacy levels of teachers in three high schools. In this study, the overall mean score for PTE was 4.57 of a possible 6. The score supports the statement that teachers who participated in the study appear to possess a strong sense of personal efficacy. Analyses of specific personal efficacy items also support the notion that participants were confident in their own abilities as teachers. For example, 94% of the 69 teachers who participated in the study felt they would be able to accurately assess whether an assignment was at the correct difficulty level if one of their students couldn't do a class assignment (Woolfolk & Hoy, 1990). The high level of agreement with

this survey item implies teacher willingness to set realistic, attainable goals for their students. It also indicates teachers' abilities to be persistent and flexible in setting learning goals for their students. A majority of teacher respondents (83%) expressed confidence in their ability to get through to most of their difficult-to-motivate students; the high agreement with this survey item shows that teachers are more likely to be resilient in the face of student conflict, and may take intellectual and interpersonal risks in the classroom to ensure that students' learning needs are met (Protheroe, 2008; Silverman & Davis, 2009). Research also confirms the idea that teachers who are confident in their ability to influence how well students learn often take personal responsibility for student achievement (Guskey, 1981; Tschannen-Moran & Woolfolk Hoy, 2001). Ninety-one percent of teacher participants in this study agreed that if a student were to master a new concept quickly, it might be because they knew the necessary steps in teaching the concept (Woolfolk & Hoy, 1990). The level of confidence and personal responsibility for

student mastery support the assumption that a high level of PTE exists among the teachers in this study.

The overall general efficacy score of the teacher respondents was 3.49 out of a possible 6 (58%). The mean score implies a moderate to low level of general efficacy in the three high schools as measured by Woolfolk and Hoy's (1990) TES. Teacher responses to four particular items contributed to the overall general efficacy level; specifically, 83% of teachers felt they could do more for their students if parents would do more for their children (Woolfolk and Hoy, 1990). The high level of agreement with this item seems to indicate teachers' belief in the pivotal role parents play in a teacher's ability to support student achievement in school.

The second item, which resulted in 77% teacher agreement, addressed discipline at home. Teachers believed that students are not likely to accept any discipline if they are not disciplined at home (Woolfolk and Hoy, 1990). This supports the idea that teachers feel powerless when it comes to control of student learning outcomes (Rose & Medway, 1981). The next item represented 62% of teacher agreement; teachers agreed that a student's home environment has more of an influence on them than the hours spent in class (Woolfolk and Hoy, 1990). The higher level of agreement with this item shows teacher perception that outside influences play a greater part in student achievement than classroom activities. Teacher agreement was markedly lower (38%) with the item that addressed how much a teacher can do to affect student motivation and performance in school (Woolfolk and Hoy, 1990); the level of teacher agreement with this item shows that overall more than half of the teachers in the study believe school has as much influence on student performance and motivation as a child's home environment.

Cultural Teaching

Teachers possess lifelong experiences that result in beliefs and perceptions, which influence their teaching efficacy (Gallavan, 2007). Previous research has found a connection between teachers' sense of efficacy, culturally responsive pedagogy, and student

achievement (Oyerinde 2008; Tschannen-Moran & Woolfolk Hoy, 2001; Tucker et al., 2005). Although no significant relationship was found to exist between GTE and culturally responsive teaching, data analysis uncovered a positive statistically significant relationship between culturally responsive teaching and PTE.

Student Engagement

The third research question guiding this study explored the relationship between teacher efficacy and student engagement in high school classrooms. Because cultural teaching was identified as a subscale of teacher efficacy during PCA in this study, the construct was combined with GTE and PTE and then analyzed to determine the relationship between teacher efficacy, cultural teaching, and student engagement.

Positive, statistically significant relationships were discovered between teacher efficacy (personal and general), cultural teaching, and student engagement. Earlier analysis established a high level (76%) of PTE in addition to an equally high (79%) culturally responsive teaching level among participants in the study. Overall student engagement in the classrooms of these teachers is moderately high (70%). The high reported use of cultural teaching by the teacher participants in each of the schools appears to show that they understand and consider student culture. Cultural understanding and consideration encourages the development of teacher-student relationships and improves the quality of teaching and learning (Elias, 2009; Gay, 2010; Glickman et al., 2014; Ladson-Billings, 2009).

Teachers need to believe they have the ability to engage students (Nadelson et al., 2012; Siwatu et al., 2011; Villegas & Lucas, 2002). The high level of personal efficacy discovered among the teachers in this study appears to confirm that these teachers believe in their ability to engage their students in [meaningful learning activities]. When the influence of the environment overwhelms teachers' abilities to have an impact on student learning, they are less likely to use multiple strategies to effectively engage students in the process of learning (Edwards, 2014;

Ladson-Billings, 2009; Villegas & Lucas, 2002). Teachers in this study were found to have a moderately low level of general efficacy; that finding

could explain the overall reduced student engagement level recorded for the

participants.

Instructional strategies and classroom management

The final research question guiding this study examined the relationship between teacher efficacy, cultural teaching, instructional strategies, student engagement, and classroom management. Analysis revealed statistically significant relationships between PTE and each of the four remaining constructs (cultural teaching, instructional strategies, student engagement, and classroom management). Teachers in this study indicated confidence in their ability to get through to difficult students; they reported using a variety of strategies to reflect different cultures in their instruction. They believe that they have the ability to craft good questions which challenge even the most capable students and expressed the ability to exert the extra effort needed to clear confusion by

providing alternative explanations and examples for their students.

A positive, slight to moderate, statistically significant relationship was also found to exist between classroom management and GTE, PTE, instructional strategies, and student engagement; a slight relationship was found between classroom management and cultural teaching, but it was not significant. Instructional strategies and student engagement exhibited the strongest relationships with classroom management: rs (67)=.467, p<.01, and rs (67)=.439, p<.01. According to research, the goal of classroom management is to create an environment in which teachers provide all students with equitable opportunities for learning (Weinstein et al., 2003). The most effective way to accomplish that goal is to use relevant, personalized, collaborative, and connected strategies to engage students with instruction (Edwards, 2014). The positive, moderate, statistically significant relationship between classroom management

and instructional strategies demonstrates teachers' beliefs in their abilities to use strategies that create equitable learning opportunities for their students.

Moderate statistically significant relationships were discovered to exist between instructional strategies, GTE, PTE, cultural teaching, and student engagement. According to Ladson-Billings (2000), when teachers combine high efficacy levels with the use of effective, culturally sensitive instructional strategies, student engagement increases dramatically. The results of the analysis confirm a high level of personal efficacy among the teachers in the study (76%), a high amount of culturally responsive strategies used in the classrooms of those teachers (79%), and a high level of student engagement in the classrooms of the participants (70%). The process of engaging students in the classroom involves elevated teacher efficacy and culturally sensitive instructional strategies; teachers are an important part of that process. In fact, Eury et al. (2011) cited teachers as the most critical "ingredient" in the maximization of student academic growth and achievement.

Conclusions

Teachers who participated in the study appear to possess a strong sense of personal efficacy and a moderately low sense of general efficacy. PTE and GTE are important parts of the intricate combination of qualities a teacher should possess in order to engage their students intellectually (Bandura, 1997; Gibson & Dembo, 1984; Protheroe, 2008; Silverman & Davis, 2009). Personal efficacy is a teacher's sense of personal responsibility in student learning (Gibson & Dembo, 1984; Moseley et al., 2014). Teachers in this study exhibited the abilities described as generally practiced by teachers who take personal responsibility for the level of student engagement which ultimately improves student achievement.

General efficacy concerns a teacher's belief about the general relationship between teaching and learning (Gibson & Dembo, 1984). Although teacher respondents expressed a general feeling that their students' home environments had a discernable impact

on student engagement in the classroom, they also expressed a general belief that they could overcome some of those influences.   Researchers have found that it is possible for a teacher to have confidence in his or her teaching ability yet feel as though outside influences have more of an impact on student learning than personal teaching abilities (Moseley et al., 2014; Protheroe, 2008; Tracz & Gibson, 1986; Woolfolk & Hoy, 1990). The teachers who participated in this study appear to fall into that category.

There was a positive statistically significant relationship found between culturally responsive teaching and PTE. In addition to the high level of personal efficacy exhibited by the teachers from each of the three high schools, all of the teachers expressed the ability to incorporate culturally sensitive strategies into their instruction. It is important for teachers to believe students from culturally diverse backgrounds want to learn (Gallavan, 2007). It is just as important to authentically and holistically use in-depth information from multiple viewpoints and perspectives about our interdependent, multicultural, international, and global society to assure student engagement and achievement in the classroom (Gallavan, 2007; Gay, 2010; Glickman et al., 2014; Ladson-Billings, 2009; Villegas & Lucas, 2002). Overall, teachers in the study felt very confident in their ability to use a variety of teaching strategies to meet the needs of their students.   The student minority population within the classrooms of the teachers involved in the study ranged from 66% to 89%. The level of confidence among the teachers together with the percentage of minority students that they teach supports research that suggests when teachers possess elevated levels of personal efficacy, they are more likely to use culturally responsive teaching strategies in their classrooms (Moseley & Utley, 2006; Oyerinde, 2008; Protheroe, 2008; Vesely et al., 2013).

    The relationship between PTE and GTE, cultural teaching, and student engagement was found to be positive and statistically significant. The teaching behaviors and instructional strategies used by a teacher can engage students and lead to improved academic achievement (Gay, 2010; Glickman et al., 2014; Oyerinde, 2008). Teachers with a strong sense of cultural

teaching efficacy tend to make decisions that are in the best interest of their students. They give all students opportunities to explore topics that are relevant and interesting to them; the result is a classroom that represents a safe space for student risk taking and learning for teachers as well as students (Ball, 2009; Paris & Ball, 2009; Villegas & Lucas, 2002). Teacher participants expressed belief in their ability to craft questions for their at-risk or unmotivated students and provide alternate explanations when those students are confused. Research has shown when teachers possess the ability to adjust their plans of action to meet students' needs while simultaneously building on their strengths, students are more likely to engage in learning (Edwards, 2014; Glickman et al., 2014; Ladson-Billings, 2009; Villegas & Lucas, 2002).

Statistically significant relationships were uncovered between teacher efficacy, culturally responsive teaching, student engagement, instructional strategies, and classroom management. Teachers in the study indicated the belief that they possess the necessary skills to effectively identify the challenge level of tasks. They also indicated the ability to break down complex, challenging tasks into something more manageable for their students (Silverman & Davis, 2009). Teachers believe they have the ability to craft questions that reflect different cultures other than their own and provide alternate explanations when students are confused using cultural examples and materials. Students who are engaged in the classroom tend to push themselves to meet their teacher's expectations (Ladson-Billings, 2009; Villegas & Lucas, 2002); as a result, student engagement and achievement improve (Edwards, 2014).

Cultural teaching emerged as an unintended facet of teacher efficacy. The perceived ability to work with diverse students is related to teachers' racial attitudes (American Psychological Association, 2012; Soodak & Podell, 1994; Tucker et al., 2005). Most teachers tend to view their beliefs and perceptions as commonly assumed and shared ways of believing and acting (Gallavan, 2007). In order to enhance efficacy, teachers must ensure that they become proficient in valuing cultural diversity in the classroom by creating an unbiased climate to facilitate learning for diverse students (Gallavan, 2007; Gay, 2010; Kitsantas, 2012: Oyerinde,

2008; Tucker et al., 2005). When classroom instruction is delivered to students through their own cultural and experiential filters, academic achievement of ethnically-diverse students improves (Brown, 2007).

There is an overall moderately low belief by the teachers in the study in the ability to overcome outside influences when it comes to teaching students. Personal confidence in the ability to teach is generally high among this group. The overall high level of personal efficacy manifests itself in generally high uses of cultural teaching and instructional strategies, which appear to engage students in all of the schools studied. As a result, there are high levels of classroom management within each of the three schools involved in this study.

Limitations

This study had several limitations that may have had a potential impact on the quality of findings pertaining to the relationship between teacher efficacy and CRTTs. The limitation that had the most potential impact on the findings was the selection process for the individuals in the study. Creswell (2014) recommended selecting "a *random sample,* in which each individual in the population has an equal probability of being selected" (p. 158). The sample used in this study was a nonprobability sample (or convenience sample) because the respondents were "chosen based on their convenience and availability" (Creswell, 2014, p. 158); as such, there was no certainty that the probability selection was equal among the potential participants. According to Laerd Statistics (2012), the failure to use a probability sampling technique significantly limits the ability to make broader generalizations from the sample to the population being studied.

Access to participants created another limitation in this study. The original study design planned for face-to-face data collection. Fowler (2014) stated that there are advantages to this type of data collection: high cooperation rates and the opportunity for the researcher to clarify questions and dig deeper when responses do not match one another. The face-to-face

response rate in this study was 55%. Eighty-four surveys were returned; 46 of those surveys were administered face-to-face and the remaining 38 online responses contained 15 surveys that could not be used due to a response rate of 6% or less. The TES, CRTT Scale, and TSES were used to collect data for this study. The three instruments were combined to form a 65-question instrument consisting of 58 survey questions and seven demographic questions.

Additional limitations to this study include the dependence on a limited number of survey questions to address the complex and varied constructs of teacher efficacy and CRTTs, and the reliance on teachers to read and honestly answer each of the 65 questions contained in the combined survey instrument. All of the data collected were self-reported. Fowler (2014) stated that answers collected from surveys can be "affected by factors other than the facts on which the answer should be based" (p. 12). Due to the length of the survey, it is possible teachers may not have taken the time to answer each question based on a true assessment of behaviors in the classroom. In this study, the researcher cannot verify the true beliefs and behaviors of the teachers participating in the study.

Recommendations for Further Study

Researchers conducting studies in this area may examine whether teachers' race or teaching experiences have an influence on the use of culturally responsive pedagogy. A mixed-method approach could be used to study the association between cultural teaching, student engagement, and student achievement. The exclusive use in this study of quantitative data to study the relationship between cultural teaching and student engagement gave a one-dimensional aspect of the relationship; classroom observations could add a dimension to the results that is not possible when using survey data alone.

Future studies could also examine the role of culturally responsive school settings and the impact of administrative support on teachers' abilities to engage culturally diverse students in the classroom. In addition, cultural professional

development, mentoring, and support efforts could be examined to determine the effect on

teachers' abilities to practice culturally responsive, differentiated instruction in the classroom.

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