Teacher Beliefs and Classroom Practices
Cognitive Dissonance in High Stakes Test-Influenced Environments

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Beliefs and practices are fundamentally interrelated and, in the classroom, a teacher holding two beliefs that are inconsistent with each other may experience tension. For example, a teacher who knows about culturally proficient teaching, but who simultaneously holds deficit beliefs by viewing students from diverse backgrounds as inherently flawed, could be said to hold heterogeneous beliefs that are inconsistent. These conflicting beliefs can be explained by cognitive dissonance theory. Festinger (1957) suggested that individuals holding opposing cognitions (i.e., beliefs, behaviors) would seek to remove dissonance by aligning beliefs and associated behaviors/practices. In public schools, teachers are expected to align their practices with culturally proficient beliefs as classroom demographics increasingly become more diverse. When teachers practice culturally proficient teaching, they are more likely to increase positive academic outcomes for linguistically, racially/ethnically, and economically diverse student populations (Aronson & Laughter, 2015; Lopez, 2016). Teachers, however, can hold deficit beliefs about students from diverse backgrounds, and in high stakes test-influenced environments, these deficit beliefs may reveal associated practices that reproduce academic disparities (Nelson & Guerra, 2014).

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Previous research has addressed several aspects of teacher beliefs and practices. This research has examined teacher beliefs (Fang, 1996; Pajares, 1992), culturally proficient teacher beliefs and practices (Aronson & Laughter, 2015; Lopez, 2016), deficit beliefs in teachers and school leaders (Guerra & Nelson, 2009; Nelson & Guerra, 2014; Valencia, 2010), and awareness of cognitive dissonance as a mechanism for reducing resistance to diversity (McFalls & Cobb-Roberts, 2001). To the best of our knowledge, no research has used cognitive dissonance theory to understand how teachers' heterogeneous beliefs—beliefs of culturally proficient teaching and deficit beliefs about academic achievement of diverse students—are parsed in accordance with practices.

In the current study, we qualitatively investigate the relationship between teacher beliefs and their associated teacher practices at two public elementary schools with diverse student populations through the theoretical perspective of cognitive dissonance. We argue that while teachers may hold theoretical beliefs about culturally proficient teaching, they may also hold deficit beliefs associated with pre-existing cognitions about the reasons for disparities in the academic outcomes of diverse student populations. Moreover, we argue that the sample of teachers minimized dissonance between conflicting cognitions by aligning classroom-teaching practices and deficit beliefs. Three research questions guided this study (RQ1-3):

- RQ1: What beliefs (culturally proficient beliefs, deficit beliefs) do teachers hold about teaching students from diverse populations?
- RQ2: What are the classroom practices of teachers with diverse students?
- RQ3: What is the relationship among culturally proficient beliefs, deficit beliefs, and teacher practices in the classroom?

We address these research questions in several steps. First, we review the literature on teacher beliefs and practices, including the topics of culturally proficient beliefs and deficit beliefs and their associated practices. We then discuss the theoretical perspective of cognitive dissonance. We use cognitive dissonance as an interpretive lens for the third research question. In the method section, we review the participants and context of the study followed by the sources of data collection and the procedures for analyzing the data. We present and discuss the findings in light of the relevant literature and cognitive dissonance theory. We conclude the study with several recommendations for teacher practice and future research.

Literature Review

Teacher Beliefs

What are teacher beliefs? Before considering teacher beliefs, we must first consider what Pajares (1992) called, the messy construct of beliefs. Beliefs have been defined in numerous ways, however, Rokeach's (1968) suggested the definition that beliefs are "any simple proposition, conscious or unconscious, inferred from what a person says or does..." (p. 113). Rokeach further suggested that beliefs integrate descriptive (e.g., I teach diverse students), evaluative (e.g., S/he won't do well on the test), and prescriptive elements (e.g., An achievement gap will always exist). Beliefs, therefore, serve as "powerful filters that shape how an individual sees the world, sees other people, and sees oneself" (Nelson & Guerra, 2009, p. 70). Yet, beliefs are unobservable constructs that must be inferred from what a person says or does (Pajares, 1992), and these inferences are driven by a particular set of assumptions about beliefs.

Rokeach (1968) outlined three assumptions underling individual beliefs related to their centrality. First, there is variance in beliefs. Second, beliefs with less variance (that is, beliefs that are more central) resist change the most. And, third, when central beliefs change, they induce changes in the larger belief system. Belief systems, according to Rokeach, not only include beliefs, but also belief substructures. Belief substructures include both attitudes and values. According to Pajares (1992), attitudes constitute clusters of beliefs organized around a situation that makes individuals predisposed to action, while values "house the evaluative, comparative, and judgmental functions of beliefs and replace predisposition with an imperative to action" (p. 314). Pajares situates values and attitudes within the structure of an individual's belief system, and this belief system undergirds teacher beliefs and their subsequent practices.

Pajares (1992) considered the messy construct of teacher beliefs to be one of the most important in educational research. For instance, public schools in the United States are experiencing increasing numbers of linguistically, racially/ethnically, and economically diverse student populations (Hussar & Bailey, 2016). With these demographic changes, teachers are expected to hold culturally proficient beliefs about students from diverse backgrounds (Nelson & Guerra, 2014). Cultural proficiency has been defined as the beliefs and behaviors of an individual (or policies and practices of an organization), enabling them to interact effectively with others in culturally diverse environment (Lindsey, Robins, & Terrell, 1999). While culturally proficient beliefs have been operationalized in different forms in schools, for example, culturally relevant pedagogy

(Ladson-Billings, 2014) and culturally responsive teaching (Gay, 2010), they have been linked to positive student outcomes, such as increased student motivation (Bui & Fagan, 2013), interest (Choi, 2013; Dimick, 2012), and confidence on standardized tests (Hubert, 2013).

Research, however, suggests the existence of disconnect between teacher and student backgrounds, which can affect teachers' beliefs about diverse student populations (Au & Blake, 2003). This disconnect is related to the asymmetry between the increasing diversity of students in the public school classroom and their teachers, who are often White, females, from a middle-class background (Sleeter, 2001; Snyder, de Brey, & Dillow, 2016). In contrast to culturally proficient beliefs about diverse populations, a multicultural educational approach has been based on the assumption that public schools have historically and systemically restricted academic success of students, because their racial, ethnic, and socioeconomic backgrounds differ from the mainstream student population (Banks & Banks-McGee, 2007).

Deficit beliefs serve as one mechanism for restricting the academic success of diverse student populations. Valencia (2010) suggests deficit beliefs are the tendency to place blame for failure on the individual rather than attributing responsibility on systemic structures and ingrained practices that may interfere with student learning. For example, Nelson and Guerra (2014) examined the beliefs and cultural knowledge of 111 practicing educators using a qualitative beliefs survey. In response to one classroom scenario, they found that, while "students drew collectivist representations of family when the teacher was expecting individualistic representations, educators tended to suggest culturally, linguistically, and economically diverse students did not have either the background information or the skills to correctly complete the assignment" (p. 86) rather than considering how the influence of culture affected the student-teacher interaction. Cummins (2001) suggested that teachers tend to perseverate on deficit beliefs rather than the distribution of economic and educational resources as factors perpetuating student underachievement. Deficit beliefs remain difficult to change (Bandura, 1986; Bruner, 1996; Pajares, 1992; Pohan, 1996). Changing deficit beliefs requires changing deep-seated assumptions by bringing them to the level of consciousness (Nelson & Guerra, 2014). Without bringing deficit beliefs to the surface, the unequal outcome differences of diverse students may be manifested in teacher practices that exclude culturally proficient sensitivity (Quiocho & Daoud, 2006; Souto-Manning & Swick, 2006; Zarate, 2007).

Teacher Beliefs and Practices

Fang (1996) suggested that teacher beliefs influence classroom

practices in consistent and inconsistent ways. Kagan (1992) noted, "a teacher's beliefs tend to be associated with a congruent style of teaching that is often evident across different classes and grade level" (p. 66). Consistency between teacher beliefs and practices has been found in different academic subjects: mathematics (Vacc & Bright, 1999), science (Czerniak & Lumpe, 1996), history (Wilson & Wineburg, 1988), and literacy (Fang, 1996). However, other research has found teacher beliefs and practices to be inconsistent (Ertmer, Gopalakrishnan, & Ross, 2001; Farrell & Lim, 2005; Wilson, Konopak, & Readence, 1991). One factor influencing belief-practice consistency has been related to context, including both the school/classroom context and the policy context (Fang, 1996). For example, contextual factors in the school/classroom include level of support from administration (Kilgore, Ross, & Zbikowski, 1990), classroom management and routines, differences in abilities of students and their learning styles, textbooks, students' social and emotional differences, teacher-student respect and relationships (Fang, 1996) while the policy context includes the influence of high-stakes standardized testing on the narrowing of academic content and teacher classroom practices (Au, 2007, 2009; Watanabe, 2007, Yamashita, 2011).

Cognitive Dissonance

Cognitive dissonance has been considered one of the most simplistic and widely accepted accounts of cognitive (i.e., beliefs, behaviors) change (Perlovsky, 2013). Festinger's (1957) theory of cognitive dissonance suggested that individuals seek to maintain consonance (or consistency) among multiple cognitions of beliefs and behaviors, among other things. When these cognitions are dissonant (or inconsistent), individuals engage in changing their beliefs and/or behaviors to make them consonant in order to achieve cognitive consistency. Dissonance can be reduced in four ways, "individuals could add consonant cognitions, subtract dissonant cognitions, increase the importance of consonant cognitions, or decrease the importance of dissonant cognitions" (Harmon-Jones, 2012, p. 544). Dissonance research has primarily focused on reducing dissonance by enacting changes in beliefs rather than changes in behaviors (Cooper, 2007). Cognitive change, however, is expected in the direction of the most central cognitions and, when applied to the present study, teacher belief-practice consistency is likely to be influenced by the policy context of high-stakes test influenced environments.

Cognitive dissonance theory has been applied in educational research related to diversity and teacher beliefs and practices. Some of this research has described the role of cognitive dissonance as a strategy in teaching for social justice (Gorski, 2009), reducing pre-service teacher

resistance to diversity training (McFalls & Cobb-Roberts, 2001), and teacher awareness of belief-practice inconsistency (Karaaðaç & Threlfall, 2004). Both Gorski (2009) and McFalls and Cobb-Roberts (2001) applied cognitive dissonance theory to help teachers and students learn about the effects of conflicting cognitions on teacher practices in the classroom. This research assumed that an awareness of cognitive disharmony would induce cognitive change to achieve harmony. Karaaðaç and Threlfall (2004), however, examined the inconsistencies between teacher beliefs and practices in mathematics classrooms. Their findings suggested that, while teachers had beliefs about mathematics teaching, their classroom practices conflicted with these beliefs even though the teachers were aware of disharmony between their beliefs and practices. From a social cultural perspective, the findings suggested the "consonant elements" from settings with shared goals were sufficient to dissipate the tension between beliefs and practice. Cognitive dissonance theory, therefore, is likely to yield an informative account of different teacher beliefs and how these beliefs are parsed according to teacher practices in the classroom.

Method

Participants and Context

Participants and context for this qualitative study were based on a purposeful, convenience sample of teachers from two public elementary schools located in the southwest U.S.. Demographic composition of the first elementary school, serving pre-kindergarten through fifth grades, included 866 students: White (54.4%), Hispanic (22.2%), Black (8.5%), Asian/Pacific Islander (9.9%), and Other (5%). From this school, 49 teachers participated, including 44 (90%) White and 5 (10%) Hispanic. Demographic composition of the second elementary school, serving third though fifth grades, included 398 students: Hispanics (52%,), White (36%), Black (7.2%), and Other (5%). From this school, 19 teachers participated, including: 16 (84%) White and 3 (16%) Hispanic. These two elementary schools were selected, because both campuses had an improvement plan indicating the need to improve state testing performance for "economically disadvantaged" and "at-risk" Black and Hispanic students. Because this study aimed to understand differences in teacher beliefs and practices and not a comparison among beliefs and practice, we combined data from both schools together. And, because this study relied on a purposeful sample, inferences beyond the present study are limited.

Data Collection and Analysis

Data were collected by two graduate students, also referred to as participant observers in this study, enrolled in an educational leadership program at a university located in the southwest U.S.. The two students collected the data using teacher surveys and classroom observations at the two elementary schools. This data allowed for a qualitative assessment and comparison between teachers' stated beliefs of culturally proficient teaching and disparities in academic achievement and the association of these beliefs with teacher practices. The survey was constructed based on a literature review of culturally proficient teaching and classroom practices for diverse students. The survey included ten, four-point, Likert-scales items ranging from strongly agree to strongly disagree (e.g., I regularly incorporate my students' background into my instruction) and four open-ended survey response questions (e.g., Why do academic disparities exist for students from diverse backgrounds?). The survey was short because teachers' time at school and away from instruction was limited.

Classroom observations were conducted using an observation protocol constructed based on the aforementioned literature review. The purpose of the protocol was to assist in documenting classroom teacher practice for diverse students populations. A total of 14 classroom teachers where observed, including four teachers in third grade, four teachers in fourth grade, and six teachers in fifth grade. Each classroom observation lasted for 45 min and was conducted once due to time constraints. Since teachers' schedules varied, often transitioning between academic subjects, the observations took place during language arts and math class.

Descriptive data from closed-ended part of the survey were calculated. Then, the open-ended survey data and notes from the classroom teacher observations were analyzed using the constant comparative method (Strauss & Corbin, 1998). Relevant data were guided by the research questions. In particular, teacher beliefs were coded according to either deficit beliefs or culturally proficient beliefs while both of these concepts were considered when coding the data from the classroom observations. To code the data, we first created a document with three columns and coding occurred at two successive stages. Open coding occurred by locating relevant phrases, words, or sentences consistent with deficit beliefs, culturally proficient beliefs, and deficit practices and culturally proficient practices. Data were put into the first two columns to represent both beliefs and practices. We color-coded relevant data using the highlighting feature. The second step included axial coding. During axial coding, relevant data were refined by collapsing similar words, phrases, and sentences into groups located in the third column. Selective statements are presented in the findings section.

Findings and Discussion

Findings from the analysis have been organized around the first two research questions pertaining to teacher beliefs and teacher practices. For the third research question, we provide a synthesized discussion that combines the findings from the first two research questions, and we interpret these findings in light of the theoretical perspective of cognitive dissonance.

RQ1: What Beliefs Do Teachers Hold about Classroom Teaching, including Deficit Beliefs and Culturally Proficient Beliefs about Students from Diverse Populations?

Deficit beliefs. Closed ended survey responses produced descriptive data suggesting teachers expressed deficit beliefs about the academic achievement of diverse student populations. There were five responses listed most often by teachers as the cause of academic disparities for diverse students, which included language spoken in the home of students (42%), students' inadequate background/home life or life experiences (47%), lack of parent education and involvement in the lives of students (37%), and students' behaviors and attitudes at school and in the classroom (37%). Other teachers expressed the beliefs that the parents of students were to blame for the achievement gap between diverse students and their more mainstream peers (48%).

Open-ended survey responses confirmed responses provided by descriptive data. Findings suggested that teachers were likely to express deficit beliefs about their students when asked to consider the reasons for the academic disparities of students from diverse background. Teacher responses often attributed the causes for the academic deficits to factors beyond the scope of their teaching, but not beyond the scope of student learning. That is, some teachers suggested, "some parents need to be taught how to help their children" while other teachers suggested that academic deficits could be addressed by "additional resources after school." Teachers also attributed the academic deficits of diverse students to the language students' parents speak at home, students' lack of life experiences, parents' lack of formal education, parents' lack of involvement in their children's schooling, and students' behaviors and attitudes in school. Teachers also explained that "students failed their class because they did not work hard enough" and that "some students were more motivated than others," noting a lack of motivation and/or work ethic as a limitation to student success in the classroom and not the result of teachers not holding expectations for themselves to improve their practice, however, they did note that additional "planning time,

smaller classes, [and] more access to technology, and less paperwork and meetings" could help to improve student outcomes. But these suggestions stopped short of implicating ineffective classroom teaching practices as a contributing factor.

Culturally proficient beliefs. Descriptive data from the teacher survey suggested teachers also expressed culturally proficient beliefs about teaching students from diverse backgrounds. Teachers expressed beliefs that their student-teacher relationship had a significant impact on their students' academic achievement (92% agreed). Teachers also expressed the beliefs that they incorporated students' background regularly into daily teacher instruction (98% agreed). Teachers believed they adjusted their instruction to meet the needs of all students in the classroom regardless of linguistic, racial/ethnic, and socioeconomic diversity (100% agreed). Teachers believed they incorporated books written by authors from diverse backgrounds in their daily instruction (73% agreed) and lastly, teachers believed they incorporated different perspectives of different backgrounds into daily instruction (90% agreed).

Open-ended survey responses confirmed responses provided by descriptive data that teachers often expressed culturally proficient beliefs about teaching students from diverse backgrounds. When asked to comment on factors that influenced student success outside the classroom, the teachers expressed the role of strong relationships with students and their families. This finding was widely recognized among the teachers. Teachers also expressed the importance of student-teacher relationships, adjusting instruction to meet the needs of students, and parental involvement as contributing factors to academic success of students from diverse backgrounds. Teachers expressed that they attempted to build parent-teacher relationships through different channels, including emails, sending notes home, and having conversations in person or via phone with students' parents. Teachers also believed they addressed race and ethnicity of students in the classroom. Teachers expressed the belief that they engaged in a wide array of culturally proficient instructional strategies. Many teachers believed they adjusted their instruction to make it culturally relevant for students. They expressed this belief through a laundry list of educational buzzwords and best practices. The instructional strategies used by teachers included utilizing students' prior knowledge and life experiences, allowing for peer interaction through think-pair-share and small groups, using visuals and pictures, giving sentence stems, working on problem based activities, offering cooperative learning opportunities, and other hands-on activities, "as well as sheltered instructional strategies" for English language learners.

RQ2: What are the Observed Classroom Practices with Diverse Students?

The second research question sought to understand the classroom teaching practices of teachers with diverse student populations. While teachers overall believed that they practiced culturally proficient teaching in their classrooms, data gathered from classroom observations revealed a different story. Observation data sided more with the deficit beliefs about teaching students from diverse backgrounds and only minimally adhered to culturally proficient teaching. For example, classroom instruction among the teachers observed was largely teacher-centered learning. Every class observed began with whole group instruction, and when transitioning to student work, only one teacher allowed students to work in groups. One participant observer noted that "lecture-style instruction where students spent their time seated and listening to the teacher for the majority of the period" was commonplace. Although teachers explained the importance of incorporating differing cultural perspectives, another participant observer explained that, "none of the teachers utilized a different cultural perspective or culturally relevant materials during the observation." Indeed, only two of the teachers observed let students share personal experiences. And, while a strong, positive student-teacher relationship was another factor educators commonly believed to impact student success, the majority of teacher-student interactions addressed issues of behavior and discipline. There was little evidence of an effort to increase students' attachment to school, as described by Carter (2005), through gaining knowledge of interests, students' life experiences, and family backgrounds to build authentic relationships. Half of the teachers were aware of their language and utilized sheltered instructional strategies more than five instances throughout the observation to ensure the academic input was comprehensible to students. Any student interaction with academic language, however infrequent, came through choral reading vocabulary words with the whole group, or student-to-teacher interaction by answering questions directed to the whole group. Half of the observations did not show any evidence of creating a meaningful or relevant context for the lesson. Only two teachers consistently connected their lessons to the students' experiences by providing real-world examples.

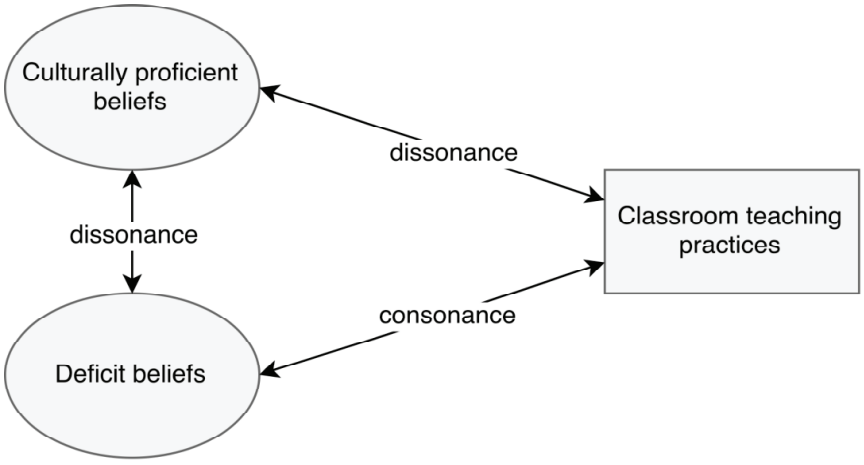
RQ3: What Is the Relationship among Culturally Proficient Beliefs, Deficit Beliefs, and Teacher Practices in the Classroom?

The last research question addressed the relationship between the findings from the previous two research questions. Figure 1 illustrates a conceptual model of this relationship. That is, the relationship among

culturally proficient beliefs, deficit beliefs, and classroom teaching practices. This model has been constructed through the theoretical lens of cognitive dissonance. This conceptual model suggests dissonance both between culturally proficient beliefs and deficit beliefs and between culturally proficient beliefs and classroom teaching practices, whereas it suggests consonance between deficit beliefs and classroom teaching practice. In other words, while teachers expressed both culturally proficient beliefs and deficit beliefs, classroom practices aligned more with deficit beliefs than with culturally proficient beliefs. How can disconnect between culturally proficient beliefs and deficit beliefs-practices be interpreted?

Cognitive dissonance theory helps interpret the findings in regard to conflicting beliefs and practice—that is, between teacher beliefs of culturally proficient teaching and teacher deficit beliefs and their associated teaching practices. The theory of cognitive dissonance suggests that individuals strive for cognitive harmony (Festinger, 1957). Disharmony existed between competing or conflicting cognitions (i.e., culturally proficient beliefs vs. deficit beliefs or culturally proficient beliefs vs. teacher practices). These conflicting cognitions influenced teachers to strive for cognitive harmony by adopting either deficit beliefs that were consonant with teacher practices or teacher practices that were consonant with deficit beliefs. In other words, to achieve cognitive harmony, teacher beliefs either influenced teacher practices or teacher practices influenced

Figure 1
Conceptual Model of the Relationship between Teacher Beliefs and Classroom Practices



deficit beliefs. These findings, however, highlight an important limitation of the study that is directional in nature. The findings do not suggest whether the flow of cognitive change for resolving disharmony occurred from beliefs to practices/behaviors or from practices/behaviors to beliefs. The findings highlight the important role of cognitive dissonance theory for understanding Fang's (1996) consistency-inconsistency problem in the teacher beliefs literature. Consistency and inconsistency of beliefs and practices may rely on one's positionality taken from an assortment of heterogeneous beliefs and their related practices.

Previous research on teacher beliefs suggest inconsistency between teacher beliefs and teacher practices (Ertmer, Gopalakrishnan, & Ross, 2001; Farrell & Lim, 2005; Farrell & Bennis, 2013; Wilson, Konopak, & Readence, 1991). However, teachers' deficit beliefs were found to be consistent with classroom teaching practices, whereas culturally proficient beliefs were found to not be associated with consonant practices. This finding suggests teachers held heterogeneous beliefs but not heterogeneous practices. This finding also supports other research suggesting teacher beliefs were consistent with associated teacher practices (Czerniak & Lumpe, 1996; Fang, 1996; Vacc & Bright, 1999; Wilson & Wineburg, 1988). Therefore, this study contributes to mediating the different findings of previous research that suggests consistency and inconsistency between teacher beliefs and teacher practices. These findings, however, are limited because this study could not identify whether teachers were aware of the inconsistency between their beliefs and practices (Karaaðaç & Threlfall, 2004). But, the findings do support the importance of cognitive dissonance training for teachers (Gorski, 2009), especially when this training is integrated with diversity training (McFalls & Cobb-Roberts, 2001) and deficit thinking as an influencing factor on classroom teaching practices (Nelson & Guerra, 2014).

Drawing on Festinger's (1957) seminal theoretical perspective of cognitive dissonance, one way individuals may alleviate dissonance is by adding a "consonant element." It is likely that this consonant element, when considering teacher beliefs and practice, related to the more central teacher beliefs-practices that were weightier (Munby, 1982). Because these weightier beliefs and practices should be considered more central, they may be more influential and likely to be influenced by the school/classroom and policy context (Au, 2007, 2009; Rokeach, 1968; Pajares, 1992; Watanabe, 2007, Yamashita, 2011). For example, teachers may express beliefs emphasizing the importance of culturally proficient teaching for diverse student populations while their practices in the classroom align with the pressures of high-stakes testing environments, making teachers' decision making and judgments ripe with contradictions that

must be sorted through. Sorting through these contradictions produces consequences for diverse student populations (Darder & Torres, 2004) related to deficit beliefs and associated practices.

In general, this research brings to light the role of educational reforms—based on outputs and originally considered a means for reducing educational inequality—in exacerbating educational inequality for diverse student populations (Carey, 2014; Hursh, 2007; Jenning & Sohn, 2014). Contrary to the policy goals of high-stakes testing for reducing academic disparities, research suggests the educational policy context of the high-stakes testing environment contributed to beliefs and practices that drive educational inequality (Au, 2007; Carey, 2014; Hursh, 2007; Jenning & Sohn, 2014). In addition, high-stakes standardized testing environments have led to "control over classroom practice, placing particular limits on the types of student learner identities deemed legitimate within testing environments" (Au, 2009, p. 66). Golann (2015), for example, noted that market-based educational reforms, like charter schools, have been found to depend on the reproduction of academic disparities while simultaneously claiming to work toward reducing these academic disparities for diverse student populations.

Conclusion

In conclusion, we examined teacher beliefs of cultural proficiency and deficit thinking about students from diverse backgrounds. Then we examined classroom-teaching practices to understand how these beliefs were parsed according to teacher practices. By considering the classroom and policy context, our findings suggested that deficit beliefs aligned more with classroom practices than did culturally proficient beliefs. Thus, heterogeneous beliefs produced a consistency-inconsistency mix associated with teacher practices. That is, we illustrated that teachers exhibited heterogeneity in their beliefs that initially appeared inconsistent with practices, but these practices were actually consistent with deficit beliefs. Cognitive dissonance theory served as an invaluable perspective to help explain the disjoint between conflicting beliefs and practices and, therefore, the findings echoed the call that "educators must help teachers understand how to cope with the complexities of classroom life and how to apply theory within the constraints imposed by those realities" (Fang, 1999, p. 59).

There are both practical implications and future areas of research that should also be considered. Teachers may benefit from professional development and/or pre-service training that integrates a triad approach, considering the classroom/policy context, culturally proficient and deficit

beliefs-practices, and the role of cognitive dissonance for understanding the contradictions in teachers' belief-behavior system. Future research, however, should aim to address the numerous limitations discussed throughout this article. It is important to be cautious when attempting to generalize the findings from this study. This study can be used as a stepping-stone for more in-depth investigation and nuanced understandings of teacher beliefs and practices. While further qualitative research can help to provide a better understanding of teachers knowing one thing, but doing something else, the conceptual model presented in this study could be used for quantitative analysis, either through multiple regression analysis or by developing a path analysis model.

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