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An Examination of the Association between Observed and Self-Reported Culturally

Responsive Teaching Practices

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Abstract

A critical next step in advancing our understanding of teacher practices that can equitably engage and support learning in diverse classrooms is determining the effectiveness of culturally responsive interventions. Yet, quantitative measurement indicators of the effectiveness of culturally responsive teaching interventions are scarce. Most research relies exclusively on self-reports, with limited attention to issues of social desirability, and few studies observe teacher practices. Data come from 142 K-8 teachers in six schools who were assessed via the Assessing School Settings: Interactions of Students and Teachers (ASSIST), an externally-conducted observation, and who also provided self-report data of cultural responsiveness. Analyses indicated that teachers self-reported higher rates of culturally responsive teaching strategies than were observed on the ASSIST. There were, however, significant associations between observations and teachers' ratings of self-efficacy. Findings suggest a need for additional research to develop and validate efficient, multi-informant approaches for assessing cultural responsiveness in the classroom.

Keywords: observations, cultural proficiency, teachers, classroom management

An Examination of the Association between Observed and Self-Reported Culturally

Responsive Teaching Practices

Although diversity within public schools in the United States continues to increase,

teachers generally lack the competencies and resources necessary to bridge cultural and

ecological divides in the classroom (Delpit, 2006). Decades of reform efforts within the broader

movement to facilitate equitable school experiences for all learners have yielded insufficient

progress (Blanchett, Mumford, & Beachum, 2005). Indeed, research continues to document

disturbing disparities not only in academic outcomes of our young people, but also in schools'

persistent disproportionate disciplining of students of color, particularly Black males (Gregory,

Skiba, & Noguera, 2010). Many consider a fundamental cause of these disparities to be cultural

and ecological discontinuities between schools and their students (Griner & Stewart, 2013). This

supposition carries some weight, considering the contrast between the predominantly White,

female, middle class teaching workforce (Zumwalt & Craig, 2005) and the majority African

American and Latino student population (63%) in U.S. urban schools (Sable, Plotts, & Mitchell,

2010).

Gloria Ladson-Billings' framework for *culturally relevant pedagogy* (Ladson-Billings,

1994; 1995) sought not only to redress disparities by ensuring students' access to the dominant

corpus of academic knowledge, but also to build students' competencies to sustain the cultural

and linguistic resources within their communities. Similarly, efforts are needed to help teachers

and students navigate cultural boundaries across disparate spheres and critique structural

inequities within their broader ecologies. This formulation of culturally relevant pedagogy built

on several decades of sociolinguistic research demonstrating the effectiveness of strategies to

enhance the fit between students' home and the school's cultural ways of knowing and learning

(Au & Jordan, 1981; Cazden & Legett, 1981; Erickson & Mohatt, 1982). In addition, it advances

a parallel line of work on the influence of structural inequities as a source of mismatch between

students and schools (Ogbu, 1994; Villegas, 1988). Since that time, a profusion of empirical and

interpretative research has emerged to explore learning as cultural practice (Gutierrez & Rogoff,

2003) and build knowledge of culturally responsive teaching strategies in diverse, urban

classrooms (Au, 2009; Bonner, 2012; Epstein, Mayorga, & Nelson, 2011; Gay, 2000; Garza,

2009; Gregory & Ripski, 2008; Lalas, 2007; Nieto, 2013; Phillipo, 2012; Sampson & Garrison-

Wade, 2011; Toldson & Lemmons, 2013; Ware, 2006). This work shaped our understanding of

culture as fluid and evolving (Bruner, 1996), and as a resource to tap, rather than a deficit or

difference to accommodate (Paris, 2012).

The available research has contributed to increased awareness of the *potential* of

culturally responsive teaching strategies in classrooms. Yet, progress toward the establishment of

an evidence base supporting effective teacher education, pre-service training, professional

development approaches, and development of innovative and practical tools to strengthen

teachers' culturally responsive teaching competencies, has been relatively sluggish (Bottiani,

Bradshaw, Rosenberg, Hershfeldt, Pell, & Debnam, 2012; Fiedler et al., 2008; Griner & Stewart,

2013). A major obstacle in determining the effectiveness of these interventions has been

measurement challenges. Traditional approaches have included self-report measures (e.g.,

Hershfeldt, Sechrest, Pell, Rosenberg, Bradshaw, & Leaf, 2009; Siwatu, 2007), but there is

growing interest in observational tools, as they may be less vulnerable to concerns regarding

social desirability. The current study aimed to inform our understanding of the extent to which

self-report and observational measures of culturally responsive teaching converge. This line of

research has implications for reducing educational disparities and improving the classroom

context for all students. Specifically, we used a multi-informant approach to assess cultural responsiveness and examined the convergence between teacher-report measures and classroom observations, while accounting for potential social desirability bias present in teacher self-reports.

Culturally Responsive Teaching

The nomenclature of culturally responsive teaching comprises an extensive repertoire of terms, including culturally relevant pedagogy (Ladson-Billings, 1995), culturally responsive teaching (Gay, 2000), culturally responsive classroom management and behavior supports (Sugai, O'Keefe, & Fallon, 2012; Weinstein, Tomlinson-Clarke, & Curran, 2004), cultural proficiency (Lindsay, Robins, & Terrell, 2003), and more recently, culturally sustaining pedagogy (Paris, 2012), among others. The current study adopts the definition of *culturally responsive teaching* provided by Gay (2000).

Culturally responsive teaching can be defined as using the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for them. It teaches *to* and *through* the strengths of these students… it builds bridges of meaningfulness between home and school experiences as well as between academic abstractions and lived sociocultural realities; it uses a wide variety of instructional strategies that are connected to different learning styles; it incorporates multicultural information, resources, and materials in all the subjects and skills routinely taught in schools. (p. 29).

There has been considerable work illustrating how culturally responsive teaching practices can be integrated into school and classroom practices (e.g., Dray & Wisneski, 2009;

Gay, 2002; Nieto, 2013; Richards, Brown, & Forde, 2007; Savage, Hindle, Meyer, Hynds,

Penetito, & Sleeter, 2011; Vincent, Randall, Cartledge, Tobin, & Swain-Bradway, 2011;

Weinstein et al., 2004). For example, a teacher professional development and coaching model

based on the Double Check framework (Hershfeldt et al., 2009) has focused on five core

components of culturally responsive teaching practices reflected in this definition: connecting

culture to the curriculum, engaging in authentic relationships with all students, reflective

thinking about cultural heritages and ways of learning and knowing, effective communication

with students and parents, and sensitivity to students' culture (Rosenberg, 2007). A study is

currently underway to assess the impact of this model on reducing disproportionality and

educational disparities. Similarly, Vincent et al. (2011) conceptualized an approach to improve

schools' cultural responsiveness through cultural adaptation of school-wide positive behavior

support (SWPBS; Sugai & Horner, 2002). The approach views disproportionate discipline

outcomes as a potential result of discrepancies between students' home and school cultures, and

suggests ways in which SWPBS implementation might facilitate culturally responsive supports.

　　　　Notwithstanding the studies described above, a substantial lack of outcome-focused

research highlights the need for additional empirical work aimed at determining if the training

and professional development provided to teachers regarding cultural responsiveness actually

translates into improved interactions with students, classroom structure, instructional materials,

and positive beliefs about other cultures. Thus, reliable and valid measures that accurately assess

teacher cultural responsiveness are needed. Given existing models' focus on improving

teachers' beliefs, behaviors, and classroom management strategies (e.g., Dray & Wisneski, 2009;

Richards, Brown, & Forde, 2007; Vincent, et al., 2011), the classroom environment is the

primary context for measuring the success of these interventions.

Measuring Culturally Responsive Teaching

A review of measures of teacher cultural responsiveness over the last several decades suggests wide variability in its measurement and an overwhelming reliance on teacher self-report. Of the self-report measures, there is a predominant focus on attitudes and beliefs (e.g., Munroe Multicultural Attitude Scale, Munroe & Pearson, 2006; Teacher Multicultural Attitude Survey, Ponterroto, Baluch, Greig, & Rivera, 1998; Cultural Awareness Beliefs Inventory, Roberts-Walter, 2007). More recently, there has been greater attention given to skills and teacher self-efficacy (e.g., Culturally Responsive Teaching Self-Efficacy Scale, Siwatu, 2007; Multicultural Efficacy Scale; Guyton & Wesche, 2005; Double Check Self-Assessment Tool, Hershfeldt et al., 2009).

Although several self-report measures exist, few of these measures have been validated for assessing teachers' cultural responsiveness. In fact, much of the extant research has focused on basic psychometric properties, such as exploration of internal consistency and factor structure, with limited attention given to convergent validity with other, more objective measures (e.g., observations). This is of concern because teachers' perceived competence in culturally responsive learning environments may not accurately reflect teachers' actual classroom behaviors, perhaps due to social desirability bias or limited insight and self-reflection. Despite these limitations of self-report data, we were unable to identify any published, empirical studies of observational, research-based measures of cultural responsiveness; moreover, we found only one study reporting on school leaders' observations of school-wide cultural responsiveness (Bustamante, Nelson, & Onwuegbuzie, 2009). Independent observational measures implemented in tandem with self-report measures may help to better establish the accurate

assessment of teacher cultural responsiveness, which is a critical next step in determining the

effectiveness of the various untested teacher cultural responsiveness models.

Current Study

Inadequate measures of culturally responsive teaching limit the advancement of our

knowledge regarding effective interventions and tools to strengthen use of culturally responsive

practices in classrooms. The issue of social desirability bias in teacher self-report seems

particularly relevant within the context of cultural responsiveness, given pressures on teachers to

narrow the achievement gap and the inherent sensitivity regarding issues of race, ethnicity, and

culture. In an effort to improve the measurement of cultural responsiveness, the current study

examined the convergence between teacher-report measures and classroom observations, while

accounting for potential social desirability bias.

We drew upon data from elementary and middle school classrooms involved in a larger

study focused on the link between culturally responsive teaching and student engagement. We

believe a focus on elementary schools is necessary because of the important developmental

timing of the early school years (Kellam & Rebok, 1992), especially with regard to academic

achievement and learning. Also important is that the rates of office discipline referrals (ODRs)

and suspensions tend to peak in middle school, as does the overrepresentation of culturally and

linguistically diverse students in discipline data (Skiba et al., 2002); this in turn suggests that

middle school is also a relevant target for examining cultural responsiveness. Specifically, our

first aim was to examine the average level of efficacy and self-reflection teachers report

regarding cultural responsiveness, as well as observed levels of classroom management and use

of culturally responsive teaching strategies. Our second aim was to examine the relationship

between the self-reported culturally responsive teaching self-efficacy and cultural awareness

with observer tallies and ratings of teacher use of culturally responsive classroom management

strategies. To address the concern that self-reported cultural responsiveness is prone to social

desirability bias (Constantine, 2000; Spanierman et al., 2011), we controlled for bias using a

previously-validated and widely-used scale. Finally, we determined whether teacher

demographics, classroom factors, and self-reported cultural beliefs predict the use of culturally-

responsive teaching strategies (i.e., as assessed by observers) in elementary and middle school

classrooms, while adjusting for social desirability. We anticipated that after controlling for social

desirability bias, there would be a positive relationship between teachers' self-reports of cultural

responsiveness and the observed use of classroom management and culturally responsive

teaching strategies. It was also hypothesized that both teachers' self-reported ratings of cultural

responsiveness and greater observed use of *other* classroom management tactics (e.g., praise,

opportunities to respond) would predict the observed use of culturally responsive teaching

strategies in the classroom.

Method

Participants

Data come from 142 K-8 teachers at six (three elementary and three middle) schools in

Maryland participating in a study focused on the link between culturally responsive teaching and

student engagement in fall 2012. The teacher sample was largely female (82.3%) and White

(87.7%); approximately 39% of teachers were between the ages of 20-30. See Table 1 for

teacher demographic characteristics. Participating schools had an average student enrollment of

543.33 ($SD = 236.98$) and included a diverse population, where 57.9% of students were ethnic

minorities.

Measures

Teacher self-report survey. We collected select teacher demographic information

including age, gender, race, socio-economic status, and number of years working in education.

The teacher self-report survey also included a battery of scales developed to measure teacher

self-reported efficacy and skills in culturally responsive teaching. It included the following three

measures of cultural responsiveness: The *Double Check Self-Reflection Tool* (30 items;

Hershfeldt et al., 2009; Cronbach's alpha [α] = .65) asks school staff to reflect on their cultural

beliefs (e.g., "every student who works hard, no matter his or her race, can excel academically"

and "it is appropriate for students to learn to communicate in standard English only"). The

Multicultural Efficacy Scale (15 items; Guyton & Wesche, 2005; α = .80) assesses teachers' self-

efficacy to provide culturally responsive instruction. Sample items include "I can help students

take on the perspective of ethnic and cultural groups different from their own" and "I can

develop activities that increase the self-confidence of diverse students." Finally, the *Culturally-

Responsive Teaching Self-Efficacy Scale* (15 items; Siwatu, 2007; α = .79) measures teachers'

culturally responsive self-efficacy as well as teachers' assessment of their ability to connect with

diverse students (e.g. "I implement strategies to minimize the effects of mismatches between my

students' home culture and the school culture" and "I use my students' cultural background to

create a meaningful learning experience."). Each item on the above culturally responsive

teaching scales was scored on a 6-point Likert-type scale where 1 = Strongly Disagree and 6 =

Strongly Agree. All scales were constructed by averaging the responses to items and higher

scores were desirable, reflecting more culturally responsive and efficacious teachers. Teachers

also completed an abbreviated version of the *Marlowe Crown Social Desirability Scale* (MC; 5

items; α = .57; Crowne & Marlowe, 1960). The MC is designed to assess whether respondents

are responding truthfully or are misrepresenting themselves in order to manage their self-

presentation. It was selected for inclusion in this study because it is still a widely-used and cited

measure of social desirability, and it is overwhelmingly used among cultural competence

researchers (e.g., Constantine , 2000; Constantine & Ladany, 2000; Spanierman et al., 2011).

Sample items on this scale include, "I have never intensely disliked any of my students," "I'm

always willing to admit it when I make a mistake," and "I always try to practice what I preach."

A higher score on this scale indicates greater bias of responses due to social desirability.

Assessing School Settings: Interactions of Students and Teachers (ASSIST; Rusby,

Crowley, Sprague, & Biglan, 2011; Rusby, Taylor, & Milchak, 2001). The ASSIST

observational measure evaluates social processes occurring in the classroom. The measure

includes both event-based tallies and global ratings of teacher behaviors. The tallied behaviors

include use of proactive behavioral management, opportunities to respond, approval,

disapproval, and reactive behavior management. Each global rating item was scored on a 5-point

Likert-type scale, from 0 (never) to 4 (almost continuously/often occurred). The global ratings

include the following teacher subscales: *teacher control of the classroom* (5 items; α = .85;

"There is evidence of classroom routines – students know what they're supposed to be doing"),

teacher anticipation and responsiveness (6 items; α = .81; "Teacher anticipates when students

may have problems behaviorally"), *teacher monitoring* (4 items; α = .85; "Teacher positions

him/herself so they can see most of the room area"), *teacher proactive behavior management* (4

items; α = .68; "Teacher gives clear instructions and directives to students"), and *teacher and

student meaningful participation* (8 items; α = .73; "Students are provided opportunities to

contribute to discussion") as well as the *culturally responsive teaching strategies* scale (4 items;

α = .56), for this project specifically. Items on the *culturally responsive teaching strategies* scale

include "Teacher connects lessons to real world examples," "Teacher engages in personal

storytelling or sharing," "Teacher uses positive humor to engage students or defuse problems,"

and "Teacher integrates cultural artifacts reflective of students' interests into learning activities

(e.g., music, local landmarks, artwork)." These subscales were validated in a confirmatory factor analysis (CFI = 0.960, TLI = 0.956, RMSEA = 0.037, WRMR = 1.385) using data from this sample. Subscale descriptive statistics can be found in Table 1. A scale score was created by averaging the items on each subscale in which higher scores were desirable, reflecting better classroom management skills.

Several classroom characteristics were also recorded, including the subject of the lesson being taught during the observation, total number of students in the class, and the classroom counts for race and gender of students. As the current study focused solely on the behaviors of classroom teachers, only the teacher-behavior tallies and subscales listed above were used in the analyses.

Procedure

Schools' participation in the current project was voluntary. The participating school district hosted principal meetings to obtain interest and school level commitment to the project. The first group of school principals invited to attend signed commitment letters to indicate their willingness to participate. Individual teachers were then recruited to participate in the study, which included completion of the self-report survey shortly followed by collection of the observational data. The researchers' Institutional Review Board approved this study.

Teacher self-report survey. Survey packets, containing the cultural responsiveness measures, social desirability scale, the demographics questionnaire, and informed consent form were distributed by the project staff during scheduled staff meetings. Staff members completed the questionnaires during the meeting and returned them directly to the project staff. If teachers were not present at the staff meeting, the survey packet and a self-addressed and stamped envelope were left in their school mailbox to be returned to the researchers through mail.

Participating teachers received a $10 gift card. The teacher participation rate was 87% of

teachers who volunteered to participate in the survey.

ASSIST. The ASSIST observers received training in four stages: 1) an initial didactic

session; 2) on-site practice; 3) on-site inter-observer agreement or reliability; and 4) on-site

recalibration. Each observer received a manual, which included the ASSIST classroom

procedures, operational definitions of all codes, and step-by-step observational recording

procedures. A series of videos and vignettes, which included coded behaviors and possible

responses, were presented to the observers for practice in the initial didactic session. Observers

also practiced coding at a non-project school; they observed at least three classroom cycles with

an expert observer. When feasible, more than one expert observer worked with the trainee, by

trading with other experts between cycles. Expert observers provided feedback and answered

questions for trainees throughout the practice sessions.

Following training and practice observations, observers were assessed for reliability in

non-project schools. Inter-observer agreement was calculated by dividing the total number of

agreements by the total number of agreements and disagreements (Barlow & Hersen, 1984).

Observers were required to meet 80% inter-observer agreement with an expert observer in three

classrooms prior to observing independently in study schools. For the current study, average

inter-observer agreement for three classroom observations during initial training was 89%. On at

least one occasion during active data collection in study schools, observers were joined by an

expert observer for an on-site recalibration session. The on-site recalibration session followed

the same procedure as the initial reliability assessment. This procedure was put in place to

prevent observer drift. Recalibration also involved three classroom observation cycles. If

observers did not calibrate at 80% or above, additional observations were conducted until 80%

inter-observer criterion was reached. Average inter-observer agreement during recalibration was

92%. In addition to evidence from calibration sessions prior to and during data collection, a

recent generalizability-study of the ASSIST indicated that less than one percent of the variance

in classroom tallies was attributable to rater, suggesting a high level of reliability among

observers using this tool. A corresponding decision-study supports the use of a single rater over

using two raters (Abry, Cash, & Bradshaw, 2014).

Five trained observers assessed all general education classrooms at each school ($M =$

13.81 classrooms per school, $SD = 8.84$). Teachers were informed in advance that observations

would be conducted in their classroom. Each observer entered the classroom and found an

unobtrusive place to view the classroom teacher and all students. To acquaint themselves with

the current classroom activities, observers waited 3 minutes before beginning the assessment.

After 3 minutes, the observer completed demographic information about the classroom and

activated a timer to begin the 15-minute tally period. For 15 minutes, the observers coded

specific teacher and student behaviors. Each discrete teacher or student behavior only counted as

one tallied event (i.e., one behavior could not be tallied in two categories). Following this tally

period, the observer left the classroom and completed the global ratings of the classroom

environment (i.e., the 6 subscales detailed above). In contrast to the tallies, all behaviors could

be used when assigning global ratings of the classroom. All ASSIST data were collected on an

electronic handheld tablet and transferred remotely for analysis.

Results

Descriptive Analyses

Descriptive information regarding the self-report survey scale scores can be found in

Table 1. There were no significant differences on the self-report survey scale scores by teacher

age, race, gender, socio-economic status, or social desirability score. However, teachers with

fewer years of experience in the field of education tended to report higher scores on the

Culturally-Responsive Teaching Self-Efficacy Scale (*F*=1.76, *p* < .05).

Correlations among Cultural Responsiveness Scales, ASSIST, and Demographics

Partial correlations, controlling for the effects of social desirability, revealed significant

associations between the cultural responsiveness scales and the other ASSIST subscales. For

example, ASSIST ratings of teacher control were negatively correlated with the teacher-reported

Culturally-Responsive Teaching Self-Efficacy Scale (*r* = -.24, *p* < .01) and Multicultural

Efficacy Scale (*r* = -.26, *p* < .01), indicating greater observed teacher control practices are

associated with less teacher-reported efficacy to work with diverse students. The ASSIST

teacher tallies of disapproval were also positively correlated with the Culturally-Responsive

Teaching Self-Efficacy Scale (*r* = .32, *p* < .01), Multicultural Efficacy Scale (*r* = .28, *p* < .01),

and the Double Check Self-Reflection Tool (*r* = .21, *p* < .01). In addition, there was a significant

positive correlation between the ASSIST cultural responsiveness teaching scale and observed

tallies of reactive behavior management (*r* = .27, *p* < .01), proactive behavioral expectations (*r* =

.18, *p* < .05), and the teacher and student meaningful participation subscale (*r* = .25, *p* < .01).

An examination of the relationship between the ASSIST cultural responsiveness teaching

scale and classroom demographic characteristics also revealed several significant correlations.

The ASSIST cultural responsiveness scale was positively associated with total number of

students in the classroom (*r* = .18, *p* < .05), suggesting that as class size increased, so did

teachers' use of more culturally responsive strategies. See Table 3 for full listing of findings.

Post-hoc analysis revealed a significant difference in the use of culturally responsive strategies

by class subject (*F*[4,158] = 285, *p* < .05). Though the mean score on the ASSIST cultural

responsiveness scale was just 0.62 on a five-point possible range from 0 (never) to 4 (almost

continuously/often occurred), math classes generally had even lower scores on this scale ($M =$

.44, $SD =$ .65), whereas social studies classrooms had slightly higher scores on this scale ($M =$

.90, $SD =$ .73).

ASSIST Cultural Responsiveness Regression Model. Linear regression analyses

explored the association between the ASSIST cultural responsiveness scale and teacher self-

report cultural responsiveness scales while controlling for teacher characteristics, observed

ASSIST classroom management strategies, and social desirability bias (see Table 4). The results

showed that the teacher and student meaningful participation subscale was significantly and

positively associated with ASSIST observed culturally responsive strategies in the classroom (β

= .22, $p <$ .05), controlling for teacher age, gender, race, and number of years in the field of

education. The addition of teacher self-reported cultural responsiveness scales indicated that the

Culturally-Responsive Teaching Self-Efficacy Scale significantly predicted the use of these

strategies in the classroom education ($\beta =$ .45, $p <$ .05). This association remained significant

after controlling for the social desirability score.

Post-hoc analyses exploring potential differences between elementary and middle school

teachers revealed significant effects for middle school teachers. Specifically, models were run

separately for elementary and middle school teachers in which results indicated that the ASSIST

teacher and student meaningful participation ($\beta =$ .23, $p <$ .05) and self-reported Culturally-

Responsive Teaching Self-Efficacy ($\beta =$ .70, $p <$ .05) were both positively associated with

ASSIST observed culturally responsive strategies in the classroom, controlling for teacher age,

gender, race, number of years in the field of education, and social desirability. Similar results

were found when teachers in only the elementary schools were examined. Among elementary

school teachers, the teacher and student meaningful participation scale ($\beta = .46$, $p < .05$), but not the Culturally-Responsive Teaching Self-Efficacy, was positively associated with culturally responsive strategies in the classroom controlling for demographic factors.

Discussion

Given the changing dynamics of the U.S. population, more efforts are needed to determine the extent to which teachers are equipped with strategies for effectively working with culturally and linguistically diverse students. Though more extensive research is currently underway to assess the effectiveness of providing cultural responsiveness training and professional development to teachers, few validated measures exist to measure the implementation of these strategies in the classroom. Toward that end, the current study aimed to address gaps in the field regarding the measurement of culturally responsive teaching strategies. We employed both observational and self-report measures, in order to determine how these ratings may be related to teacher characteristics and to explore potential concerns regarding social desirability. Although virtually all self-report surveys are prone to social desirability bias (Nederhof, 1985; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), this is of particular concern when measuring sensitive topics, such as those related to race, ethnicity, and culture. Indeed, descriptive analyses showed that the average scores on all three self-report cultural responsiveness scales were toward the high end of the scale, whereas the observational data suggested low rates of culturally responsive teaching strategies.

Though the zero-order correlations (presented in Table 2) did not suggest significant relationships between the observed use of culturally responsive teaching and self-reported teacher scales, there was a positive relationship between the culturally-responsive teaching self-efficacy scale and observed use of these strategies in the classroom, when controlling for social desirability. Similar to the zero-order correlation findings, the ASSIST meaningful participation

scale was also significantly associated with teachers' self-ratings of cultural responsiveness, whereas no other ASSIST subscale was related. Specifically, this observational scale attempted to measure teachers' efforts to actively engage students in the lesson through sharing their ideas, asking questions, and taking leadership roles. This ASSIST scale also had the lowest score when compared to the other ASSIST ratings of the classroom environment. Meaningful participation or student engagement is a vital part of the school climate and classroom environment (Goodenow, 1993; Klem & Connell, 2004; Lee & Smith, 1995; Willingham, Pollack, & Lewis, 2002). Results suggest that teachers who espouse more culturally responsive teaching strategies may be more successful in meaningfully engaging their students in the classroom. This finding is consistent with previous research in which students reported that culturally responsive teaching strategies had a positive effect on their effort and engagement in class content (Howard, 2001).

Findings also suggested that some classroom-level factors are associated with the use of culturally responsive practices. For example, ratings of culturally responsive teaching behaviors were lower in math classes than other major subjects. This may indicate a difficulty that math teachers have in translating these practices within the context of this instructional content. Indeed, math and science teachers often report having difficulty adapting curricula to be more relevant to student culture and interests (Lee, 2005; Proweller & Mitchener, 2004), however a growing body of research is accumulating to suggest that culturally responsive strategies can be easily used in math and science classrooms (Bonner & Adams, 2012; Emdin, 2010; Shumate et al., 2012). On the other hand, teachers in social studies classrooms had higher scores on the use of culturally responsive practices. Teachers may find it easier to adapt these lessons to incorporate cultural artifacts relevant to students and connect the lesson to real world examples, given that social studies naturally includes the study of different cultures. Fitchett et al. (2012)

found that pre-service teachers exposed to an in-depth culturally responsive teaching

epistemology reported more efficacy in their abilities to teach culturally responsive social studies

content. The area of cultural responsiveness across different subjects should be further explored

to determine whether this is content-driven, as suggested above, or perhaps relates more to the

training or personalities of teachers in the different subject areas. It should be noted however,

that on average, the scores on the use of culturally responsive teaching strategies remained

within the 0 (never) to 1 (rarely) range, highlighting the larger issue that these strategies are not

being seen enough in classrooms.

Finally, results showed a positive correlation between observations of culturally

responsive teaching strategies with observed proactive and reactive behavior management tallies.

While one might anticipate that teachers who effectively use culturally responsive teaching

strategies are more positive and skilled and thus would also use more proactive statements in the

classroom, the relationship between culturally responsive strategies and reactive behavior

managements warrants further examination. It is possible that teacher's attention to students'

lives, sharing of personal stories, use of humor, and integration of relevant cultural artifacts (i.e.

culturally responsive strategies) may create a more casual, informal classroom environment in

which behavioral expectations become less clear. In such an environment, you might see a

teacher making more explicit attempts to manage behavior. This could include proactive

reminders of behavioral expectations as well as reactive responses to student problem behaviors.

Additional research is required to examine students' behavior in response to observed culturally

relevant teaching practices.

Limitations

The current study had some limitations which should be noted. The relatively high scores on the self-report measure suggest that more work is needed to validate these measures and maximize the utility of the full range of the response scales. In addition, given that the internal consistency for one scale (social desirability) was relatively low, additional research is needed on the survey in larger and more diverse teacher samples to further explore its psychometric properties. The use of an observation is important in coping with this phenomenon, and thus was a main contribution of this paper. However, the ASSIST includes just one visit to a classroom for a limited amount of time (i.e., 15 minutes); this highlights a main obstacle in using observations as measures: they require a lot of time and resources for a time-limited snapshot of the classroom environment. Because of this limited observation window, it is possible that some culturally responsive practices occurred at other unobserved times during the teachers' instruction. Despite this potential concern, the objectivity of the observations and the lack of studies assessing cultural responsiveness emphasize the importance of this study. Moreover, a recent study found moderate stability in observations of teacher and student interactions within one school day, indicating that similar interactions would have been observed if multiple classroom visits had been conducted (Curby et al., 2011).

In addition, the current study included 142 teachers with limited racial diversity (88% White) across 6 elementary and middle schools, in just one school district. It is unknown if these findings would be comparable in other school districts or among teachers with greater diversity, however this racial make-up is comparable to the larger school district and student population. In addition, national data also show that the vast majority (81.9%) of teachers are White (USDOE, 2012). Though this study is representative of national and local data overall, more research in high minority teacher populations is needed to expand our knowledge regarding the teacher-

student culture gap and how it interplays with cultural responsiveness. Methodologically, the

current analyses did not account for school-level nesting of teachers, given the small school

sample.

Conclusions and Implications

This study addressed several gaps regarding measurement of culturally responsive

teaching, as it is among the first study to systematically examine the association between self-

report and observational measures of cultural responsiveness. There has been limited use of

observational measures to assess culturally responsive teaching practices in the classroom. In

contrast, much of the research has relied largely on teachers' own ratings of their culturally

responsive practices to determine training needs and the success of interventions (Bottiani et al.,

2012; Hershfeldt et al., 2009; Siwatu, 2007). The use of two unique perspectives on culturally

responsive practices provides an important contribution to the literature on the measurement of

this construct. While it is important to allow teachers to reflect on their cultural beliefs, it is

equally important to obtain an assessment of actual usage of skills, and should include more

objective assessments (e.g., observations). These findings also highlight the likely importance of

objective measures of cultural responsiveness to making data-based decisions for reducing

disproportionality. Objective measures, like the ASSIST, can be used by school administrators

and staff to examine and support teachers' implementation of culturally responsive practices.

Although there is increased awareness of and attention to the overrepresentation of

African American students in special education (Artiles & Trent, 1994; Coutinho & Oswald,

2000), office disciplinary referrals (Bradshaw et al., 2010; Skiba et al., 2002), and suspension

data (Krezmien, Leone, & Achilles, 2006), there are few empirically-supported strategies that

have been systematically tested and shown to reduce these inequities. The prevailing framework

for reducing disproportionality focuses on increasing awareness of disproportionality and

professional development to incorporate multicultural instruction with culturally responsive

teaching approaches (Bottiani et al., 2012; Artiles & Trent, 1994; Richards et al., 2007; Walker-

Dalhouse & Risko, 2009; Xu & Drame, 2008). More training and coaching on culturally

responsive classroom behavior management strategies is needed for teachers and all school staff

(Hershfeldt et al., 2009; Bottiani et al., 2012; Weinstein et al., 2004). However, training and

coaching will not sufficiently reduce disproportionality alone. Teachers will need data-based

feedback on their implementation of culturally responsive classroom behavior management

strategies in the classroom (Bottiani et al., 2012). In addition, measures of culturally responsive

teaching are also needed to assess the effectiveness of such teacher professional development

efforts. More efforts are needed to ascertain the frequency and quality of the strategies currently

being used and how research can help support their proliferation.

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Table 1.

Teacher Demographics and Scale Scores

Teacher Characteristics (*N* = 142)	*N* (%)
Male	23 (16.2)
Female	119 (83.8)
Race/Ethnicity	
American Indian/Alaskan Native	1 (0.7)
Asian/Pacific Islander	3 (2.1)
Black/African American	10 (7.0)
White/Caucasian	121 (85.2)
Hispanic	1 (0.7)
Other	2 (1.4)
Missing	4 (2.8)
Age	
20-30	55 (38.7)
31-40	34 (23.9)
41-50	24 (16.9)
51-60	26 (18.3)
60+	2 (1.4)
Missing	1 (.7)
Socio-economic status	
$40,000 - $59,999	46 (35.1)
$60,000 - $79,999	25 (19.1)
$80,000 +	60 (45.8)
Missing	11 (7.7)
	M (SD)
Years in education	11.48 (9.34)
Survey and Observation Data	*M (SD)*
Teacher Self-Report	
Culturally-Responsive Teaching Self-Efficacy	4.65 (0.43)
Multicultural Efficacy Scale	4.81 (0.45)
Double Check Self Reflection Tool	3.73 (0.30)
Social Desirability Scale	4.70 (0.49)
ASSIST Observations	
Tally: Proactive Behavior Expectations	6.51 (3.92)
Tally: Approval	4.52 (4.16)
Tally: Disapproval	0.42 (0.92)
Tally: Reactive Behavior Man	5.94 (4.55)
Tally: Opportunities to Respond	15.30 (10.09)
Global: Teacher Culturally Proficient Teaching	0.62 (0.68)
Global: Teacher and Student Meaningful Participation	2.07 (0.72)
Global: Teacher Control	3.44 (0.65)
Global: Teacher Anticipation	2.72 (0.75)
Global: Teacher Monitoring	3.26 (0.66)
Global: Teacher Proactive Behavior Management	2.46 (0.84)

Table 2.

Correlations among ASSIST and Cultural Proficiency scales, controlling for Social Desirability

	2	3	4	5	6	7	8	9	10	11	12	13	14
ASSIST Observations													
1. Global: Culturally Proficient Teaching	.175*	.081	.127	.265**	-.046	.254**	-.003	.053	.106	.018	.091	.075	-.020
2. Tally: Proactive Behavior Expectations		.082	-.025	.145	.009	.050	.167*	.150	.181*	.065	.009	-.107	.036
3. Tally: Approval			-.009	-.081	.215*	.367**	.179*	.319**	.217*	.504**	.002	-.071	.026
4. Tally: Disapproval				.329**	.124	-.017	-.465**	-.244**	-.118	-.216*	.316**	.281**	.213*
5. Tally: Reactive Behavior Management					.132	.027	-.432**	-.144	.058	-.245**	.099	.087	.081
6. Tally: Opportunities to Respond						.377**	.044	.065	.168*	.109	-.086	-.081	.109
7. Global: Meaningful Participation							.189*	.379**	.228**	.345**	-.096	-.128	.099
8. Global: Teacher Control								.608**	.532**	.618**	-.236**	-.263**	-.066
9. Global: Teacher Anticipation									.531**	.710**	.006	-.089	.061
10. Global: Teacher Monitoring										.496**	-.097	-.148	.012
11. Global: Teacher Proactive Behavior Management											.019	-.064	.040
Teacher Self-Report													
12. Culturally-Responsive Teaching Self-Efficacy												.747**	.499**
13. Multicultural Efficacy Scale													.408**
14. Double Check Self Reflection Tool													

$^*p < .05,$ $^{**}p < .01$

Table 3.

Correlations between Culturally Proficient Teaching (ASSIST) and Classroom-level Factors

	2	**3**	**4**
1. Culturally Proficient Teaching	.041	.154	.179*
2. Percent of male students		-.232**	-.152
3. Percent of students who are White			.238**
4. Total number of students			

*$p < .05$, **$p < .01$

Table 4.

Linear Regression for Culturally Proficient Teaching Scale of the ASSIST

Variable	B	Std Error	Beta
Block 1			
Age	.012	.095	.024
White	.127	.168	.073
Male	.108	.159	.065
Socio-economic status	-.035	.080	-.050
Years in the field of education	-.003	.011	-.050
Block 2			
ASSIST Meaningful Participation	.223	.092	.251*
ASSIST Teacher Control	.091	.131	.095
ASSIST Teacher Anticipation	-.051	.123	-.062
ASSIST Teacher Monitor	.093	.114	.097
ASSIST Teacher Proactive Behavior	-.023	.108	-.030
Block 3			
Culturally-Responsive Teaching Self-Efficacy	.449	.225	.318*
Multicultural Efficacy Scale	-.116	.208	-.085
Double Check Self-Reflection Tool	-.345	.225	-.170
Block 4			
Social Desirability Scale	.058	.124	.046
Constant	-.791		

Note. $* = p < .05$