RUNNING HEAD: STUDENT MEASURE OF CULTURALLY RESPONSIVE TEACHING

The Development and Validation of the

Student Measure of

Culturally Responsive Teaching

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Abstract

This article describes the development and validation of the Student Measure of Culturally Responsive Teaching (SMCRT). Exploratory and Confirmatory factor analyses supported a model of students' perceptions of culturally responsive teaching. The factor structure of the SMCRT indicated a second-order factor (culturally responsive teaching) that explains 3 first-order factors (Diverse Teaching Practice, Cultural Engagement, and Diverse Language Affirmation) of students' perceptions of culturally responsive teaching. Results provided evidence of internal consistency, and convergent validity was demonstrated by positive relationships between the SMCRT and measures of teacher support and school belonging.

Keywords: culturally responsive teaching, measure, students' perspectives, diversity education

The increasing disparity between the cultural/linguistic backgrounds of students and teachers in the public schools has prompted the need for teaching practices that are culturally sensitive and responsive (Gay, 2002). The need for culturally responsive pedagogy is further exemplified by reports indicating that students from culturally and linguistically diverse backgrounds experience academic achievement at significantly lower rates than others (U.S. Department of Education, 2005). In particular, Hispanic students comprise the fastest growing student population in the United States, but experience the lowest rates of academic success and school completion of all ethnic/racial groups (U. S. Department of Education, 2005). Gay (2000, 2002) emphasized that culturally responsive teaching practices are essential for educators to promote academic achievement among students from diverse cultural and linguistic backgrounds. As our understanding of the importance of culturally responsive teaching continues to develop, it is important to have adequate measures of culturally responsive teaching practices. Currently, there are no measures that assess students' perspectives of their teachers' practices. The purpose of the current study was to develop and examine the validity of a student measure of culturally responsive teaching (CRT).

Gay (2002) defined culturally responsive teaching as integrating the experiences, perspectives, and histories of students from different cultural backgrounds into teaching practices. Culturally responsive teaching is based on the assumption that students' academic achievement can be improved when knowledge and skills are presented in ways that are consistent with their cultural frame of reference (Gay, 2000).

Ladson-Billings (1995) emphasized that culturally responsive pedagogy can be carried out only by teachers who have developed sociocultural consciousness of themselves and others and have a sense of caring about the holistic needs of students. She further outlined three central

tenets of culturally responsive pedagogy; 1) High Expectations, 2) Cultural Competence, and 3) Critical Consciousness.

According to Ladson-Billings (1995) culturally responsive pedagogy includes *High Expectations* or high behavioral and academic expectations for all students and providing the supports necessary for all students to be successful. Getting to know students' strengths and interests and designing learning tasks that build on these strengths and interests is one way that teachers can provide supports to facilitate student learning (Morrison, Robins, and Rose, 2008). By supporting the learning needs of all students, teachers demonstrate their desire to facilitate learning and convey the assumption that all students can learn. In addition, teachers who treat all students with respect establish an expectation for mutual respect and cooperative learning within the classroom and encourage students to support and learn from one another (Morrison, Robins, & Rose). Ladson-Billings described *Cultural Competence* as facilitating the development of cultural competence and healthy cultural identities within all students. Teachers can facilitate this process by identifying and acknowledging students' cultural competencies and connecting their current knowledge to future learning (Morrison, Robins, & Rose). This might include allowing or engaging in the use of students' home languages, either formally or informally, in the classroom; integrating multicultural information into the curriculum, and involving parents in their students' schooling. The use of students' home languages in the classroom can be useful as a tool for learning, in modeling the strengths of code-switching, in helping students express themselves, and in demonstrating the value for languages other than English (Benson, 2003; Hollie, 2001; Howard, 2001; Stuart & Volk, 2002). Integrating information and materials from different cultures into the curriculum can help to bridge the culture-gap between school and home for non-mainstream students and help students from all cultural backgrounds learn about

the cultures of others as well as their own. Finally, *Critical Consciousness* was defined as facilitating students' development of critical consciousness. To facilitate the development of critical consciousness, teachers can acknowledge the cultural backgrounds that students bring as assets, address the power dynamics within society, and help students to recognize inequities and injustices faced by people from non-mainstream backgrounds. Although culturally responsive pedagogy emanates from the need to promote the success of non-mainstream students, we believe teaching that facilitates the development of academic achievement, cultural competence, and critical consciousness prepares students from all cultural/linguistic backgrounds to succeed in a pluralistic society.

Culturally responsive teaching requires that teachers develop multicultural competencies as well as competencies in general teaching pedagogy (Gay, 2002; Ladson-Billings, 1995). Specifically, culturally responsive teachers must develop culturally sensitive awareness and attitudes (Gay, 2000; Phuntsog, 2001& Ponterotto, Baluch, Greig, & Rivera, 1998) and cultural knowledge about specific ethnic groups (Brown, 2007; Brown & Howard, 2005; Gay, 2002; Villegas & Lucas, 2002). Furthermore, culturally responsive teachers must develop the skills necessary to apply cultural awareness and knowledge in the provision of equitable and culturally relevant learning opportunities to culturally diverse students (Leavell, Cowart, & Wilhem, 1999).

Several measures have been developed to assess teacher's multicultural awareness and sensitivity (Henry, 1986; Ponterotto, et al., 1998), cultural attitudes and biases (Johnson & Johnson, 1996), multicultural competence (D'Andrea, Daniels, & Noonan, 2003), and concerns regarding working with students from diverse cultures (Marshall, 1996). These measures allow for the self-assessment of teachers' and pre-service teachers' multicultural competencies, but are limited because teachers' self-reports may not accurately reflect actual classroom practice.

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Seeking to provide a more accurate assessment of pre-service teachers' potential for culturally responsive teaching, Siwatu (2007) used social cognitive theory (Bandura, 1977) to develop two instruments; the Culturally Responsive Teaching Self-Efficacy Scale (CRTSE) and the Culturally Responsive Teaching Outcome Expectancy Scale (CRTOE). According to Bandura's (1977) Social Cognitive Theory, actual behavior may be more accurately predicted by assessing two forms of expectancy beliefs; *self-efficacy beliefs*, beliefs regarding one's ability to organize and execute specific actions to achieve a desired outcome and *outcome expectancy beliefs*, one's expectations of the outcomes that may result from specific behaviors. The CRTSE is a self-report measure that assesses the extent to which teachers believe they are capable of providing culturally responsive teaching. The Culturally Responsive Teaching Outcome Expectancy Scale (CRTOE) measures the extent to which teachers believe in the positive outcomes attributed to culturally responsive teaching.

Both instruments were developed on the basis of an extensive literature review of culturally responsive pedagogy that included the work of Ladson-Billings (1995) and others (Siwatu, 2006). According to Siwatu, culturally responsive teaching practices can be categorized into the following four domains: (a) *curriculum and instruction*, the use of students' cultural knowledge and prior experiences to enhance the reciprocal process of teaching and learning, (b) *classroom management*, the facilitation of a classroom environment that values the unique cultural background of all students, (c) *student assessment,* the use of various assignments to assess student learning, and (d) *cultural enrichment and competence*, the promotion of knowledge and skills necessary for success in a pluralistic society and the affirmation of different cultures and languages.

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Although, the CRTSE and CRTOE offer promise in the assessment of teachers' culturally responsive self-efficacy and outcome expectancy beliefs, they are limited by their self-report design. A number of caveats are inherent in the interpretation of information derived from self-report instruments. For instance, respondents may interpret items on the measures differently than intended by the author. Respondents may answer in ways that they perceive to be socially desirable. Finally, responses may reflect respondents' anticipated instead of their actual attitudes and behaviors.

The perspective of students is an important, yet often overlooked, perspective to consider in the assessment of teaching practice (Howard, 2001). Despite this oversight in research, information from students regarding their perceptions of culturally responsive teaching efforts has been said to prove potentially more useful than observations of third-party observers (Waxman & Huang, 1997). Furthermore, scholars have suggested that what students experience in the classroom may be quite different from what the teacher intended (Waxman, 1989). For example, Elicker, Thompson, Snell, and O'Malley (2009) found that the perspectives of instructors of an undergraduate psychology class regarding the extent to which they emphasized diversity differed significantly from the perspectives of their students. Considering the shortcomings of self-report measures of CRT and potential differences between teachers' intentions and students' experiences, obtaining students' perceptions becomes ever more important.

The study of culturally responsive teaching practice has not matured at the same rate that the student population in public schools has diversified. This may be due, in part, to the limitations of available measures of culturally responsive teaching. Essentially, we found no research that has examined associations between teachers' ability to teach in a culturally

responsive manner and measures of teacher self-efficacy, or positive student outcomes. The

development of a measure that assesses students' perceptions of culturally responsive teaching

practices would allow researchers to compare teachers' pedagogical intentions of CRT to the

experience of students. In addition, a measure of students' perspectives of CRT would allow for

the examination of positive outcomes related to the experience of CRT. Information gleaned

from such investigations could be used to guide the training of teachers and the development of

culturally relevant curriculum in the public schools. In addition, students' perspectives of their

teachers' practices could be used to design strategic classroom interventions.

  The purpose of the current study was to develop a measure of students' perspectives of

culturally responsive teaching practices. Specifically, an instrument that measures students'

perceptions of culturally responsive teaching practices was developed and validated. To achieve

this purpose the following hypotheses were tested.

  Hypothesis 1: Exploratory factor analysis will produce a four-factor (maximum)

   Model that depicts the four domains of culturally responsive teaching identified

  by Siwatu (2006).

  Hypothesis 2: Items on the instrument will demonstrate internal consistency.

  Hypothesis 3: The instrument will have construct validity as evidenced through

  confirmatory factor analysis.

  Hypothesis 4: Responses on the instrument will correlate positively with a measure of

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 school belonging.

Hypothesis 5: Responses on the instrument will correlate positively with a measure of

teacher support.

Method

Item Generation

An initial pool of 36 items was developed based on the literature regarding culturally

responsive pedagogy and the items from the CRTSE and CRTOE (Ladson-Billings, 1995;

Morrison, Robins, & Rose, 2008; Siwatu, 2007). Each initial item was derived from items on the

CRTSE and CRTOE that were modified to reflect culturally responsive teaching practices that

could be observed by students. Each initial item was representative of at least one of the three

tenets of culturally responsive pedagogy outlined by Ladson-Billings (1995). The second author,

an assistant professor in school psychology, reviewed the 36 items to ensure that the items

accurately described observable teaching practices that were described in items on the CRTSE

and CRTOE. Three items were revised for clarity. Both authors examined the items for relevance

to middle-school students and level of readability; eight items were consequently deleted and

two items were revised. Finally, a senior faculty member in curriculum and instruction reviewed

the remaining 28 items for clarity, readability, and age appropriateness. Two items were revised

based on her feedback.

Pilot testing

The 28 items were administered to a small sample (N = 5) of middle-school students.

Based on input provided by the students, the format of the items and the response sets were

modified to provide clarity.

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Participants and procedures

The study was conducted in accordance with Internal Review Board protocol for conducting research with minors. The parents/guardians of all 1,216 seventh-grade students enrolled in four middle-schools within the same school district near the United States and Mexico border were mailed a complete description of the study printed in both English and Spanish. The complete description included the purpose of the study; researcher compliance with Institutional Review Board protocol; the rights, responsibilities, and potential risks of participants; the procedures for participating in the study, and instructions for opting their teen out of participating in the study. Students whose parents did not opt for them to abstain from participating were eligible for solicitation and were provided a verbal and written description of the study, their rights, responsibilities, and potential risks for participating. Students choosing to participate signed Assent forms prior to beginning the survey.

A total of 748 (61.5% participation rate) students participated in the study. A total of 468 students did not participate in the study because their parent/guardian opted for them to abstain from participation, mailed documents were returned as undeliverable, or because the students were absent from school at the data collection times. Participating students self-identified as Hispanic (n = 478, 63.9%), African American (n = 15, 2%), Caucasian (n = 128, 17.1%), Asian (n = 15, 2%), Native American (n = 12, 1.6%), Bi-racial (n = 54, 7.2%), other (n = 23, 3.1%). Twenty-three (3.1%) students provided no information regarding ethnicity. Nearly half (n= 373, 49.9%) of the students identified as female, and 365 (48.8%) identified as male; ten (1.3%) students did not indicate their sex. Participant ages ranged from 11 to 14 (M= 12.71; SD = .059). Students identified their family's residency in the United States as: first generation (n = 57, 7.6%), second

generation (n = 213, 28.5%), 460 (61.4%) third generation or higher, no information was provided by 18 students (2.5%). Only 80 (10.7%) students reported that they were currently receiving English Language Learners (ELL) services at school.

Data collection

The data for the current study were collected as part of a larger data collection project wherein middle-school students completed a survey packet during the regular-scheduled school day. Students who were opted out of the study were assigned alternative activities by their teachers during the data collection period. Survey packets included the 28 items assessing students' perceptions of culturally responsive teaching practices, one copy of each survey instrument with instructions, and a demographic questionnaire. In addition to the instruments used in the current study, the Parental Involvement in Schooling Scale (Steinberg, Lamborn, Dornbusch, & Darling, 1992) and the Jonson-Reid et al. (2005) adaptation of Bachman's (1970) School Ability Self-Concept Index were included in the survey packet but were not used in the current study. A full-description of these instruments can be found in Authors (2010) report of the larger study.

Measures

School belonging. The Psychological Sense of School Membership Scale (PSSM; Goodenow, 1993) is comprised of 18 Likert-type items that measure the extent to which students feel that they are accepted and belong within their school. Response ratings range from 1 (*strongly disagree*) to 5 (*strongly agree*), and contribute to three subscales that assess feelings of acceptance, belonging, and rejection within school. Higher scores indicate a higher sense of acceptance and belonging. Items include: "Other students here like me the way I am"; "Teachers here are not interested in people like me"; and "People here notice when I am good at

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something." Goodenow reported Cronbach's alpha of .88 in early studies with suburban students. In addition, significant correlations with PSSM scores and scores of student motivation, academic grades, and teachers' perceptions of student effort were cited as evidence of construct validity. Cronbach's alpha for the PSSM scale in the current study was .77.

   Teacher support. The Child and Adolescent Social Support Scale (CASS; Malecki, Demaray, Elliot, & Nolten, 1999) is a 60-item assessment of students' perceived social support. On the basis of 6-point Likert-type scale (1=Never, 6= Always), the CASS provides five subscale scores of perceived support from teachers, parents, classmates, close friends, and the school. The subscale for teacher support was used in the current study. The Teacher Support subscale contains 12 items that measure students' perception of emotional support, informational support, instrumental support, and appraisal support provided by teachers. Sample items include: "My teacher (s) care about me"; and "My teacher (s) makes it okay to ask questions." Malecki and Demaray (2002) provided evidence of strong psychometric properties for the CASS. Specifically, reliability of scores on the teacher support subscale was evidenced by internal consistency reliability coefficients; .95 for a total sample for 1,110 students, .91 for White students, and .94 for minority students. In addition, test-retest scores for 85 students after 8 weeks revealed a correlation coefficient of .70 for the total score of social support. Confirmatory factor analysis provided evidence of construct validity. In addition, CASS subscale scores of teacher support were correlated ($r =.64$) with subscale scores on the Social Support Scale for Children (Harter, 1985), a similar measure of social support for children. Cronbach's alpha for the Teacher Support scale in the current study was .81.

Results

Preliminary Analyses

An Independent *t*-test was conducted to determine if the students who self-identified as Hispanic scored differently on the total Student Measure of Culturally Responsive Teaching than students who self-identified as non-Hispanic. No significant differences were found due to student ethnicity; t (644) = 1.14, $p > .10$ (two-tailed). Hence, responses from all students were combined and used in the factor analyses.

Data provided by students were divided randomly so that half of the data were used for exploratory factor analysis (EFA) and half of the data were used for confirmatory factor analysis (CFA).

Step 1: Exploratory Factor Analysis

The initial EFA was conducted with the baseline 28 items in order to identify a probable factor structure. Using the Mplus program version 5, the Full Information Maximum Likelihood estimation was utilized. We anticipated extracting, as a maximum, four distinct factors that represented the four domains (i.e., curriculum and instruction, classroom management, student assessment, cultural enrichment and competence) of culturally responsive teaching practice (Siwatu, 2006). Moreover, we posited that the potential factors would be correlated. Using the Promax rotation to allow factors to correlate, the initial EFA yielded five factors that met the first criteria for factor retention; eigenvalues were greater than 1.0 (Kaiser, 1958).

Two additional criteria were considered in the decision to retain factors. First, only factors that had at least three items were retained (Floyd & Widman, 1995; Tabachnick & Fidell, 2001). Second, only factors that were interpretable and meaningful within the context of culturally responsive teaching theory were retained (Worthington & Whittaker, 2006). Results showed that Factor 2 was comprised of only two items that had loadings greater than .45 and

Factor 4 had only one item that had loadings greater than .45; both factors were consequently dropped. Thus, three factors were retained for further consideration.

The three-factor solution appeared to conform partially to our hypothesized theoretical framework adopted from Siwatu (2006). One factor included items that represented a combination of two of the four teaching domains (i.e., curriculum and instruction and classroom management). A second factor included items that represented the teaching domain of cultural enrichment and competence. The teaching domain of student assessment was not represented by the extracted factors, because corresponding items were not strong enough to form a separate factor. A third factor included items that represented teachers' practice of speaking in Spanish. The three-factor solution also reflected the tenets of culturally responsive pedagogy (high expectations, cultural competence, and critical consciousness) (Ladson-Billings, 1995) and was determined to be the best fit for the Student Measure of Culturally Responsive Teaching.

The decision to retain items was made by examining the item loadings and cross-loadings on the factors. Items were retained if the item factor loading was no lower than .45 and any cross-loading was no greater than .30 (Worthington & Whittaker, 2006). As a result, seven out of twenty eight items were deselected. The remaining 21 items were included in the final EFA.

The three factor solution with the remaining 21 items yielded clearly interpretable results. The first factor consisted of 11 items that measure students' assessment of their teachers' use of diverse teaching methods, the extent to which their teachers provide supports to help students to meet high academic and behavioral expectations, and promote a climate of mutual respect. This factor was labeled as *Diverse Teaching Practice*. The second factor with 7 items measures students' assessment of the extent to which their teachers incorporate cultural information and discussions of students' cultural values in learning activities. This factor was labeled *Cultural*

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Engagement. The third factor consisting of three items measures students' assessment of their teachers' acknowledgment of the value of languages other than English by speaking, at times, in Spanish. This factor was labeled *Diverse Language Affirmation*. The final EFA yielded adequate goodness of fit: Root Mean Square Error of Approximation (RMSEA) =.055; and Root Mean Square Residual (RMSR) =.034. According to Brown and Cudeck (1993), RMSEA values of .05 or less indicate a close fit and of .08 or less indicate adequate fit. RMSR less than .10 is considered as acceptable fit (Worthington & Whittaker, 2006). The factor loadings of the final EFA are provided in Table 1.

Step 2: Confirmatory Factory Analysis

Using the second half of the dataset, a CFA was conducted to replicate the results derived from the EFA. By designating each of the items to the factor with which it produced a factor loading greater than .45 during the final EFA, the CFA model was tested, using the Full Information Maximum Likelihood estimation. Results from this analysis yielded acceptable fit: Chi-square value = 407.06, df = 186, p<.001; Comparative Fit Index (CFI) = 0.923; RMSEA=.056 (90% confidence interval: .049, .064); and SRMR =.049. CFI values above .95 are considered as adequate fit (Hu & Bentler, 1998) while values greater than .90 are considered as acceptable fit (Bentler & Bonnet, 1980). The chi-square to degree of freedom ratio was 2.19, which is meeting the model fit criterion that requires the ratio be less than 3.0 (Bollen, 1989). Thus, all the model fit indices were in the adequate to acceptable range.

We further compared two models: a correlation model in which first-order factors correlate with one another; a second-order factor model in which a second-order factor subsumes the first-order factors (see Figure 1). Although the configurations of these two models look different, these models are mathematically equivalent, that is, they showed exactly the same chi-

square test results and goodness-of-fit indices. Thus, the comparison should rely on theoretical

explanation (Worthington & Whitaker, 2006). The second-order factor model was chosen as the

final model because the first-order factors of Diverse Teaching, Cultural Engagement, and

Diverse Language Affirmation can be explained by the second-order factor of culturally

responsive teaching. The loadings of the first-order factors on the second-order factor were

significant at the level of $p = .001$: .83 for Diverse Teaching, .78 for Cultural Engagement, and

.54 for Diverse Language Affirmation. All factor loadings from the final model are provided in

Table 2.

Reliability

Reliability for the CRT scale and each of three subscales (i.e., each factor) was estimated

via a measure of internal consistency; Cronbach's alpha. Data from all participants were included

in this analysis. Results showed: .89 for Diverse Teaching Practice (M = 38.95, SD = 9.00), .85

for Cultural Engagement (M = 16.64, SD = 6.17), .71 for Diverse Language Affirmation (M =

8.96, SD = 3.07), and .90 for the entire scale (M = 64.68, SD = 15.00).

Convergent Validity

To assess convergent validity, correlational analyses were conducted with SMCRT scores

and two other relevant constructs, teacher support and school belonging. It was hypothesized that

students' who perceived their teachers to be culturally responsive would perceive a greater sense

of teacher support and a greater sense of belonging within the school. Since teacher support and

CRT directly measure qualities of teachers' teaching practice, it was hypothesized that teacher

support and CRT would be closely related to each other and would demonstrate a moderate to

large effect size. In addition, the relationship with school belonging was hypothesized to be

moderate. Results were consistent with our hypotheses, indicating significant correlation coefficients of .62 and .42 for teacher support and school belonging, respectively.

Discussion

The purpose of the current study was to develop a measure of students' perceptions of culturally responsive teaching practices. Results from exploratory and confirmatory factor analyses indicated that the 21-item SMCRT consists of three first-order factors (a) Diverse Teaching Practice (11 items), (b) Cultural Engagement (7 items), and (c) Diverse Language Affirmation (3 items); and one second-order factor, culturally responsive teaching. Reliability estimates indicated good internal consistency among the scales. Convergent validity of the measure was also supported by significant relationships between students' higher ratings of culturally responsive teaching practices and their sense of belonging to school and being supported by teachers. Collectively, the results of the study suggest that the SMCRT is a psychometrically sound measure of middle-school students' perceptions of their teachers' culturally responsive teaching practices. The SMCRT advances the assessment of culturally responsive teaching beyond the use of self-reports by assessing students' perceptions of teaching practices believed to represent culturally responsive teaching.

The 3-factor structure of the SMCRT is similar to Siwatu's (2006) conceptualization of culturally responsive teaching competencies. Siwatu described four domains (curriculum and instruction, classroom management, student assessment and cultural enhancement and competence) of teaching practice that encompass culturally responsive teaching competencies. Consistent with his conceptualization, the factor structure of the SMCRT indicates a second-order factor (culturally responsive teaching) that explains 3 first-order factors. In other words, teachers who have developed competencies in culturally responsive teaching can be expected to

demonstrate (a) diverse teaching practice, (b) cultural engagement and (c) diverse language affirmation.

The SMCRT should not be construed to include a comprehensive list of culturally responsive teaching practices. However, the items on the SMCRT embody the tenets of culturally responsive pedagogy outlined by Ladson-Billings (1995) and reflect three teaching domains identified by Siwatu (2006) (curriculum and instruction, classroom management, and cultural enhancement and competence) plus an additional domain that addresses the importance of using languages other than English. Items on the Diverse Teaching Practice scale represent the domains of curriculum and instruction and classroom management. The scale assesses students' perceptions of the extent to which teachers establish a value for mutual respect within the classroom and use various approaches to enhance and support the learning of students from diverse backgrounds. Items on the Cultural Engagement scale represent the teaching domain of cultural engagement and competence (Siwatu, 2006) and assess students' perceptions of the extent to which their teachers acknowledge the different cultural values of students and include cultural information in learning activities. Finally, the Diverse Language Affirmation scale assesses the extent to which teachers demonstrate a value for languages other than English by speaking, at least occasionally, in Spanish. Although the factor of Diverse Language Affirmation does not directly parallel with Siwatu's (2007) four teaching domains, this factor reflects the importance of honoring the home language in classroom. Morrison, Robbins, and Rose (2008) noted that honoring the native languages of students in the classroom was an aspect of cultural competence as defined by Ladson-Billings (1995) that teachers have used to enhance learning and affirm the cultural identities of students whose native language was not English. This aspect of cultural competence may be particularly salient for students who have or are

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learning English as a second language. The occasional use of languages other than English in the classroom may also be an effective way for teachers to convey to all students an appreciation for the mastery of various languages; simultaneously facilitating the development of critical consciousness. Future research might examine differential ratings among students with varying levels of English language acquisition.

Implications

The SMCRT can be used in training, program development, and research. For instance, students can evaluate the cultural responsive practices of student-teachers. According to Waxman and Huang (1997) evaluations from students can be quite informative and perhaps more beneficial than those from other observers. Indeed, third-party evaluations are limited to observations made at a particular point in time, whereas the SMCRT allows for an evaluation based on students' experience of a teacher's practice over time. Therefore, students' reports on the SMCRT may provide a more accurate portrayal of the day-day practices of teachers. Student responses on the SMCRT would allow teacher educators and student teachers to identify particular areas of strength and areas in need of further development in order to provide teaching that students experience as culturally responsive. Teacher educators can also use this information as a component of program evaluation to assess the efficacy of their teacher education programs in preparing culturally responsive teachers.

As the student population in public schools continues to diversify the need for culturally responsive classrooms and school environments is becoming ever more important. School psychologists and counselors must be resourceful in their efforts to reduce the achievement gap across diverse student populations. The SMCRT is a tool that psychologists and counselors can use to help teachers become more culturally responsive and perhaps more effective with students

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from different cultural backgrounds. Finally, the SMCRT can be used as a tool to advance the research of culturally responsive teaching practice and related outcomes.

Limitations

A limitation of the current study is the homogeneity of the student sample. The majority of the students in the current sample identified as Hispanic. In addition, all of the students were in the seventh-grade and attended public school in the same school district near the U.S.-Mexico border.

Future Research

Future research with Hispanic students in other regions of the country and with students from other cultural backgrounds and grade-levels is needed to provide information about the external validity of the SMCRT. Although items on the Diverse Language Affirmation scale target the Spanish language, future researchers might substitute other languages to match the linguistic backgrounds of targeted student populations. Furthermore, researchers may opt to exclude the Diverse Language Affirmation scale for use with samples of students who may differ culturally but share a common language. Future revisions of the SMCRT might examine unique practices that may be relevant to particular subject areas (i.e., math, science, English). Additional research might include correlational studies with student reports on the SMCRT and teacher self-reports of culturally responsive teaching self-efficacy and/or other third-party evaluations of teaching practice. Finally, research that examines the relationship between student scores on the SMCRT and potential outcomes such as school belonging and academic performance will expand our understanding of culturally responsive teaching practice and its utility in promoting the academic success of students from different cultural backgrounds.

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CULTURALLY RESPONSIVE TEACHING

Table 1

Means, Standard Deviations, EFA Factor Loadings, Communalities, and Eigenvalues for the

Student Measures of Culturally Responsive Teaching (SMCRT)

Items: My teacher(s) …	M	SD	F1	F2	F3	*h2*
explain what we are learning in different ways to help students learn.	3.64	1.03	**.58**	.06	.03	.39
want parents to be involved in student learning.	3.59	1.22	**.66**	-.03	-.03	.40
provide visual examples when explaining things.	3.46	1.13	**.69**	.05	-.00	.52
use things like videos, pictures, and guests to help students learn.	3.37	1.18	**.53**	.10	.09	.41
want students from different cultures to respect one another.	3.86	1.31	**.61**	-.00	.03	.39
use what I already know to help me understand new ideas.	3.59	1.16	**.73**	.01	.04	.57
try to communicate with my parents about my grades and what I am learning.	3.51	1.24	**.58**	.05	-.02	.36
treat all students like they are important members of the classroom.	3.59	1.19	**.80**	-.12	.03	.57
try to find out what interests me.	3.00	1.27	**.57**	.27	-.01	.56
use real-life examples to help explain things.	3.43	1.19	**.77**	.01	-.10	.55
use examples that are interesting to help students learn.	3.48	1.15	**.65**	.01	.07	.48

CULTURALLY RESPONSIVE TEACHING

(Table 1 continued)

Items: My teacher(s) …	M	SD	F1	F2	F3	h2
use examples from my culture when teaching.	2.40	1.27	-.15	**.70**	.07	.44
ask about students' home-life.	2.14	1.13	-.02	**.50**	.03	.26
are interested in my culture.	2.40	1.23	.17	**.61**	-.01	.50
ask about ways that students' culture may be different from others.	2.42	1.19	.06	**.79**	-.06	.63
speak about contributions that my culture has made to science.	2.27	1.25	.00	**.79**	-.06	.58
help students learn about other students and their cultures.	2.44	1.25	.05	**.67**	.11	.56
have talked about the ways that people from different cultures are not understood.	2.54	1.23	.26	**.49**	-.01	.43
have spoken in Spanish to me or to other students who speak Spanish.	2.85	1.36	-.11	.13	**.71**	.54
my teachers speak in Spanish.	2.85	1.21	.10	-.10	**.76**	.58
I have heard my teachers allow students to speak in Spanish at times in class.	3.12	1.32	.07	-.01	**.48**	.25
Eigenvalues			7.97	2.10	1.44	

Factor Correlations			
Factor 1	--		
Factor 2	.54	--	
Factor 3	.44	.45	--

Note. Bold typeface indicates which items composed the derived scales. Fl =Diverse Teaching Practice; F2 = Cultural Engagement; F3 = Diverse Language Affirmation; *h2* = communality.

CULTURALLY RESPONSIVE TEACHING

Table 2

Factor loadings extracted from the CFA Promax rotation solution for the SMCRT

Factors and Items (My teacher(s)…	Factor Loadings
Factor 1: Diverse Teaching Practice	
explain what we are learning in different ways to help students learn.	.63
want parents to be involved in student learning.	.52
provide visual examples when explaining things.	.68
use things like videos, pictures, and guests to help students learn.	.54
want students from different cultures to respect one another.	.56
use what I already know to help me understand new ideas.	.70
try to communicate with my parents about my grades and what I am learning.	.62
treat all students like they are important members of the classroom.	.73
try to find out what interests me.	.68
use real-life examples to help explain things.	.61
use examples that are interesting to help students learn.	.73
Factor 2: Cultural Engagement	
use examples from my culture when teaching.	.62
ask about students' home-life.	.48
Are interested in my culture.	.77
ask about ways that students' culture may be different from others.	.74
speak about contributions that my culture has made to science.	.69
help students learn about other students and their cultures.	.71

CULTURALLY RESPONSIVE TEACHING

(Table 2 continued)

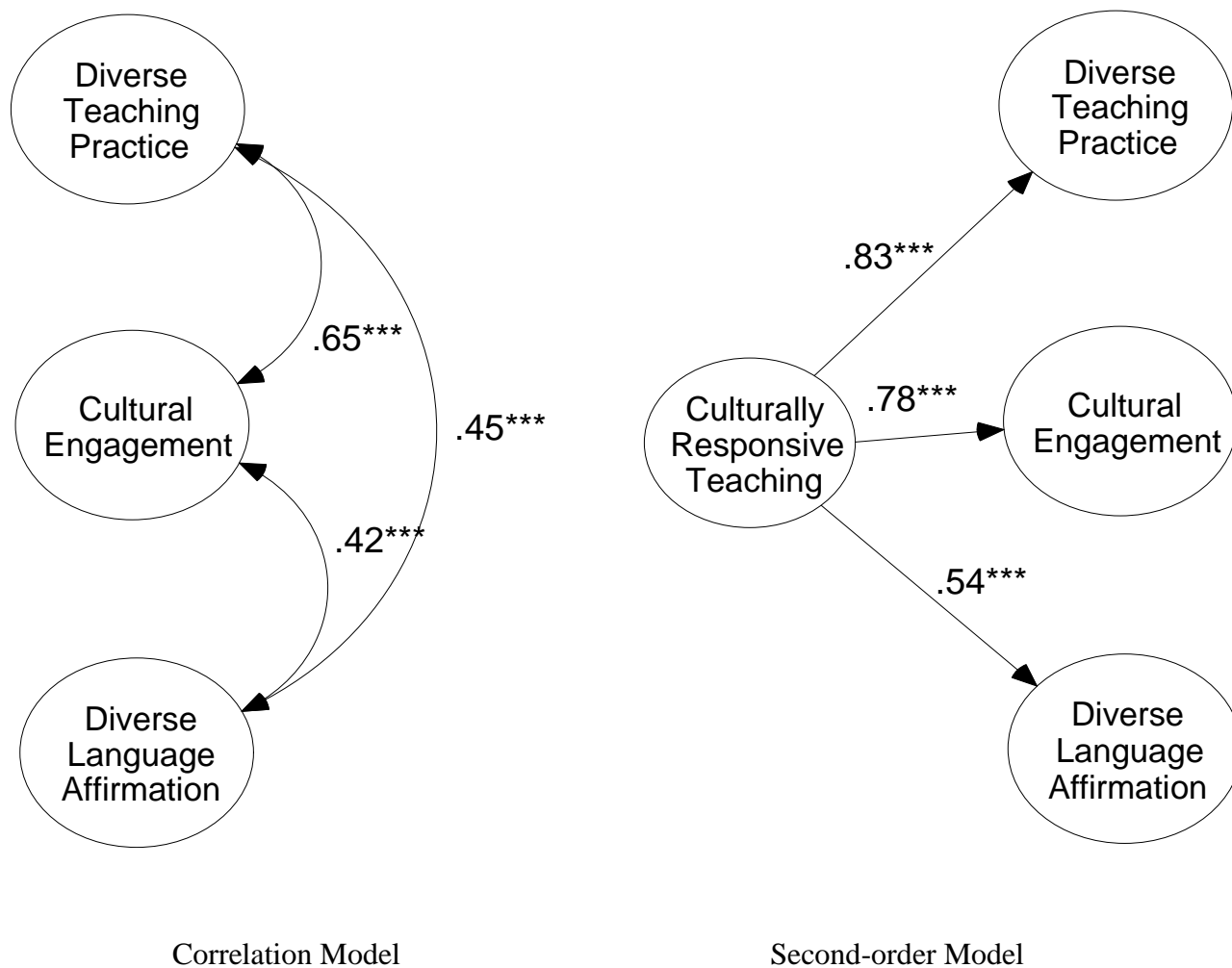| Factors and Items (My teacher(s)…	Factor Loadings
have talked about the ways that people from different cultures are not understood.	.61
Factor 3: Diverse Language Affirmation	
have spoken in Spanish to me or to other students who speak Spanish.	.76
I have heard my teachers speak in Spanish.	.75
allow students to speak in Spanish at times in class.	.57

CULTURALLY RESPONSIVE TEACHING

Figure 1 Correlation and Path Coefficients from the Correlation and Second-order Models